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The Journal of the Fire Protection Profession

SEPTEMBER 4, 1929

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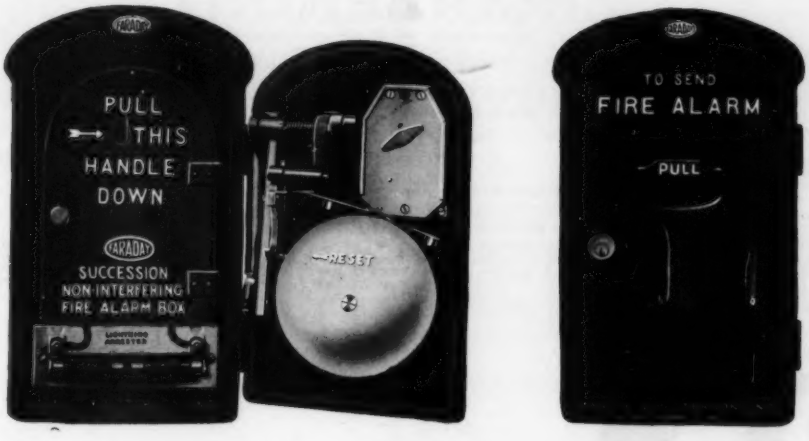

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There Are Questions

THE story is told of a prominent banker who was once prevailed upon to give a talk to the boys at a reformatory. He prepared his address with care, and those hundreds of erring lads listened to his advice with interest. They seemed moved. The banker believed he had done them a lot of good.

"Now, boys," he asked at the conclusion, "are there any questions you would like me to answer?"

A boy with red hair and very large ears stood up.

"Mister," he said respectfully, "can you burn through them new style safe doors with an oxy-acetylene torch?"

¶ Our own Editor (and he doesn't write this column, incidentally) admits that he, too, might suffer a little embarrassment if he were asked the best way of breaking jail, or how to get a winning hand in poker. But when it comes to the subject of fire protection, we're willing to bet dollars to doughnuts any time there isn't a question he can't answer. The study of fire problems is his labor of love. He'd rather talk fire than eat, sleep or drink, and boys, that's saying something!

¶ So shoot along your questions. Let's keep the old boy happy!

The Publishers

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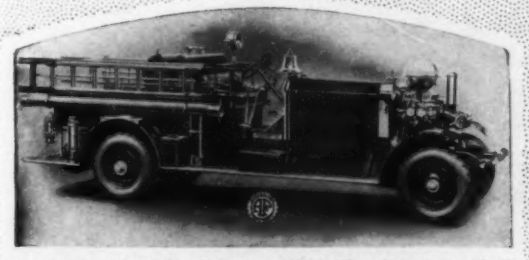
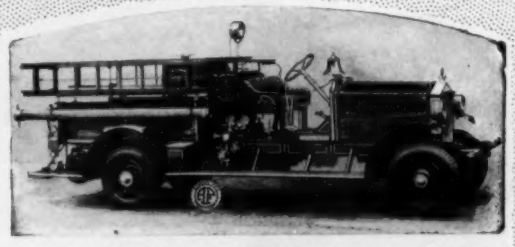


Piston Type Pumpers



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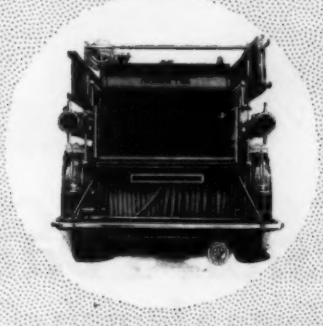
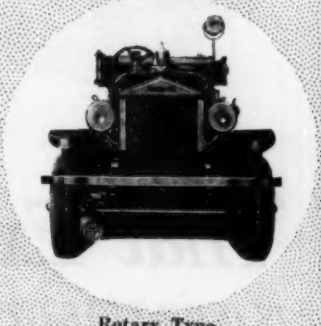
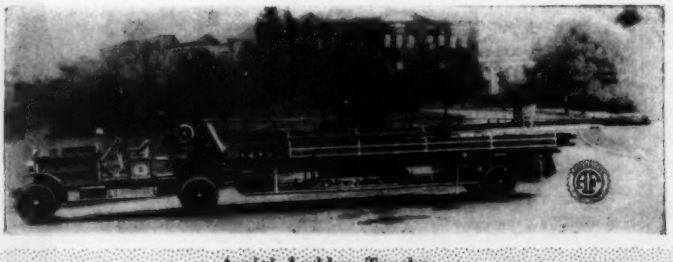




Rotary Type



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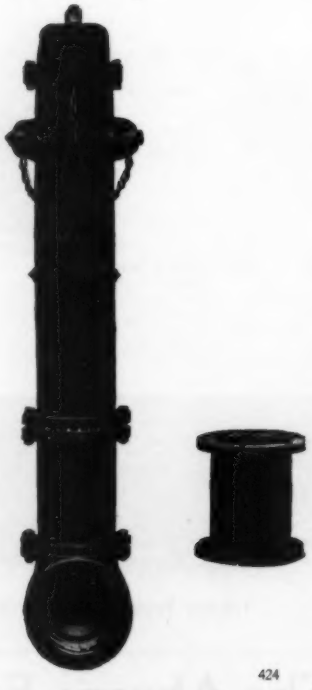

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The Journal of the Fire Protection Profession

VOLUME LXXXII SEPTEMBER 4, 1929 NUMBER 18

Fire Fighting as Seen by an Outsider

Fire Department Should Be Kept Out of Politics— Adequate Salaries Should Be Paid to Chief and Men

By FRANK G. McELROY, President, Louisiana Insurance Society, Shreveport, La.

TODAY in the United States we lose from fifteen to eighteen thousand lives every year from fires, and we presume between four hundred million and five hundred million dollars worth of property is burned up each year, and you seldom see anything about it in the papers. We must educate the public to fire prevention. It is much easier to fight the fires before they start. In most cases the insurance company pays for the loss so far as the property is concerned, but there is no recompense for lives lost on account of fire.

In the city of Shreveport some years ago, we had a bad fire record, but thanks to our efficient Chief Flores, we have a much better record today. He has put in a system of inspection, especially in the down town district, whereby the business establishments are visited regularly, and the men performing the work must report to the Chief on each piece of property inspected. I believe that has cut down the fires in Shreveport from one-third to one-half, just by this inspection work.

Must Keep Fire Department Out of Politics

Another thing that is most important is that the Fire Department should never be mixed up in politics. When politics enter the Fire Department the efficiency of that department is lost. A man working for a fire department has by constant work and efficiency been promoted to captain or Chief. Then a politician comes in office and puts him out, after he has given all these years to that service. This is not just or fair. I recently talked to a gentleman who had given 47 years of his life to fire fighting.

It is wrong for politics to enter a fire department, because a man has very litt'e to work for, when he knows that a new administration may get his job any time. Of course, so far as the insurance companies are concerned, they have to pay a large occupation tax to the city, but this is borne by the public, as well as everything else. The public pays the cost.

Cooperation With Fire Department

Bear in mind that all insurance agencies want to cooperate with their fire department, due to the fact that we cannot make money for the company we represent without it. In Shreveport, we have the fullest cooperation from Chief Flores, working through the Insurance Exchange. If we find conditions very unsatisfactory; that is to say, if we find a hazard, or what we consider one, or a bad arrangement of schools, churches, theatres, etc., we make a complaint. The agent's name is not given. Chief Flores will go personally, or send one of his men to inspect that place. If he finds it a hazard, he has it corrected and put in proper shape.

We have a case coming up in Caddo Parish Court, which is going to be tried soon, whereby the property owner had a fire in his residence and the house next door caught fire. The man who owned the house next door had no insurance, and he is now suing property owner for his loss. In New York City this proposition has been threshed out and taken to the Supreme Court, and the man who suffered the loss was able to get a judgment against the man who had the fire. This is brought down from the old English law in regard to those hazards.

Should Guard Against Over-Insurance

One of our great evils today in so far as insurance companies are concerned, is from the agent, who

"THE Fire Department should never be mixed up in politics. When politics enter the Fire Department the efficiency of that department is lost. A man working for a fire department has by constant work and efficiency been promoted to Captain or Chief. Then a politician comes in office and puts him out, after he has given all these years to that service. This is not just or fair."

will over-insure property. This we should guard against.

We have in many instances tried to help the fire department in securing equipment, because we could see the need of it; besides the insurance rates are based on the amount of losses, and the efficiency of the fire department, as well as water supply.

A Model Building Code

For several years in the city of Shreveport, we did not have an adequate building code. Last year a Building Code was adopted and put in use in the city, which is recognized as a model building code for towns and cities. The city authorities have worked faithfully at this work. The matter was put up to the contractors and a committee was appointed to study the needs here. We did not want to work a hardship on any one; after months of study and much hard work, and many meetings held, they finally completed our present code. I think it is a wonderful work, and much credit is due the ones responsible for it.

Does Not Favor State Insurance

Many people advocate state insurance funds. No state should ever enter into the insurance business. Eighteen states have tried the state insurance fund and out of the 18, there have been only two that were able to successfully operate it. In these cases the plan has been in operation but a short time, so it is not declared a success. One reason is that the insurance companies operate privately, but when the state goes into business, it is operated from a political standpoint. It gets into politics. The man is appointed by a politician and knows he does not have to give a day's work, or send any proof or reports, because the job is strictly political. We do not believe any insurance fund can be operated by any state over a period of a year and be successful.

Educate the Public in Fire Prevention

The people can only be informed to the danger of fires by education. The National Board of Fire Underwriters spends a large amount of money in the different states through advertising, in regard to preventing fires and fire prevention. We cannot say too much about fire prevention.

If any other country, according to population, should have fires as we do, it would simply be a crime to them. We burn up $5.50 where the foreign country burns up from 18c to 20c. It is costing the people and the people have to pay for it. If you have insurance on a building and happen to have a fire, the cost goes back to the people. We should, therefore, educate the people—it would certainly be mony well spent. If our fire department should not make a run in the whole year, we shouldn't mind that; it would be money saved.

Poor Fire Department Salaries

I might state here that in my personal opinion, I think the men in the Fire Department and Police Department are the poorest paid men there are. I don't know what they pay in other places, but I know what they are paid here in Shreveport. This is not a criticism against the city of Shreveport, but at the salary we pay, it is a shame and disgrace to ask a man to work for it. Of course, this is my personal opinion and I am not criticizing the administration, because I know they don't have the money, but it seems as if some arrangements could be made to care for that item. New Orleans raised more money—Chief Evans went out and asked the people to help him, and they did. It isn't right to ask a man to go through the things that a fireman has to go through, risk his life, subject himself to such dangers, for the salary he receives. There are a few cities that pay as much as $150 per month. It is not the Chief's fault that you do not receive more money. He would be willing and glad to give it, but, these men should not be asked to work for a such a small salary, when they could get from forty to fifty dollars a week by working as a mechanic, or most any other occupation. These firemen get up all during the night—when the bell taps, they must get out. I believe that it is only through education that we can ever obtain results.

As to Firemen's Pensions

Until a few years back no action was taken toward pensions for firemen. We have what is known as a Pension Fund for retired firemen and policemen in Shreveport. Most of the large corporations, railroads and other great industries, retire their men on a per cent of his salary, after they have been in service for a number of years, and that will enable him to live and give hi menough that he will not have to call upon his family for support.

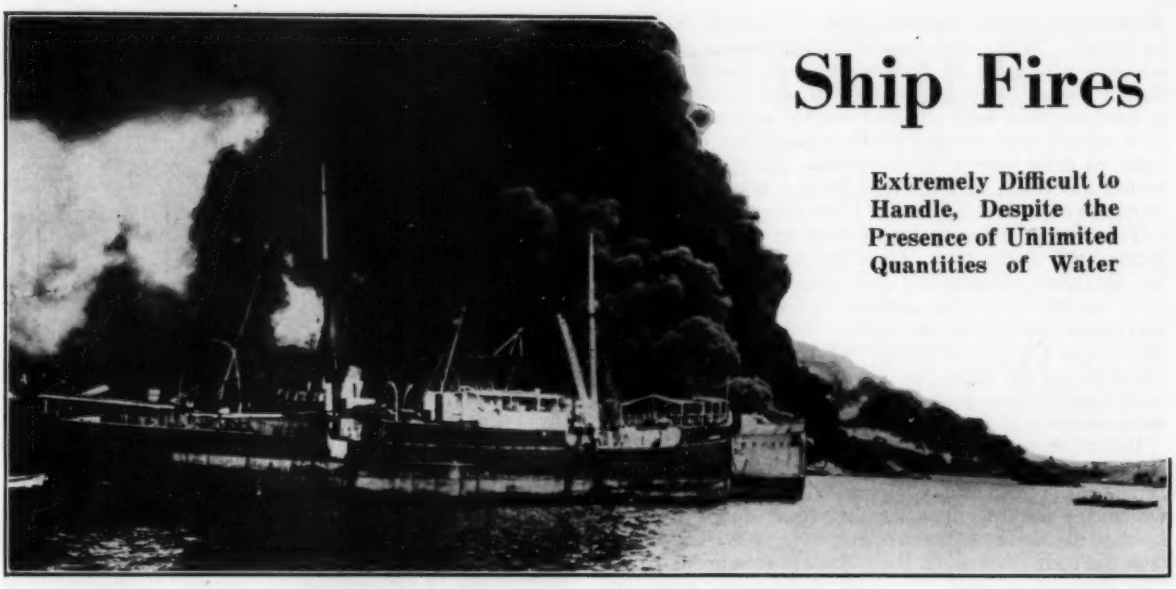
(Excerpts from a paper read before the annual convention of the Southwest Fire Chiefs' Association at Shreveport, La.)

Elevator Fire Keeps Toledo Workers From Their Homes

About one thousand persons were prevented from returning to their homes for many hours when a grain elevator in Toledo, Ohio, burned, and it was necessary to raise a bridge across the Maumee river to prevent cars from driving over fire hose and to hold crowds back. The fire was a most spectacular one and resulted in $125,000 damage.

Frank Hand, Chief in Titusville, Pa.—Frank G. Hand has been appointed chief of Titusville, Pa., in place of A. Longtine who was chief for the past twenty-eight years. Chief Hand has served the department for thirty-five years.

Forest Fire Imperils Long Island Homes—About two hundred firemen were called out to fight a forest fire north of Patchogue, L. I., N. Y., which threatened many Long Island homes.



Ship Fires

Extremely Difficult to Handle, Despite the Presence of Unlimited Quantities of Water

Marine Fires Have Their Own Method of Spreading

The illustration above shows a fire which occurred at Rio de Janeiro, Brazil. Several ships were involved and some small craft after taking fire, floated down the river, spreading the blaze to docks and to vessels moored along the way. In such a case the fire department has to follow the fire.

SHIP fires are particularly hard to handle, due to three conditions:

First, absence of horizontal openings through which fire department may operate.

Second, presence of large quantities of combustible materials, tightly packed within the body of the ship.

Third, channels for communication of fire throughout ship (where bulkhead or compartment doors are left open).

As at fires on land, the first thing to do at a ship fire is to locate the fire. By locating it is meant determining the point within the ship at which the fire is burning.

The ship's officers are generally aware of the particular part of the ship or cargo on fire. A very excellent precaution to be taken while the department is locating the fire is to have the ship's officer get the diagram of the ship. Bulkhead and compartments can be easily located by this diagram as also the particular cargo which is in that part of the vessel.

One or more hatches should be removed on each deck until the compartment on fire is reached.

Ordinarily, special fire extinguishing apparatus provided on board vessels would be employed as the first means of extinguishing the blaze. Carbon dioxide and steam systems are excellent, if they are in operable condition, and if the fire has not gained too much headway.

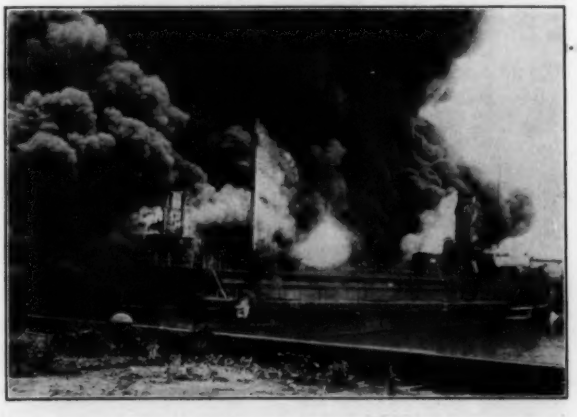
On the other hand, if the fire has gotten beyond the ship's fire extinguishing equipment, it will be necessary to flood the compartment or compartments involved. Before doing this, see that all bulkhead doors are closed as well as deadlights, because the compartment as it fills with water is in all probability liable to cause the ship to list. Should the cargo ports or other ports be left open, the vessel would fill with water and sink. Should the bulkhead doors be left open the water would flow from the compartment on fire and flood the entire length of the ship, thereby doing unnecessary damage to cargo and other parts of the vessel, as well as failing to accomplish its purpose of flooding the burning compartment.

Where it is necessary to flood the hold of the vessel, lines of large diameter hose (3½-inch if it is available) are stretched and operated with open butts, the butts being dropped down into the compartment through hatches and ventilators. Sufficient pump pressure is maintained to keep from ten to twenty pounds at the open butt.

Danger of Listing

A ship in a condition known as "light" or partly discharged will take a very heavy list if water is poured into a compartment, so as to perhaps capsize the vessel. In order to avoid this, lines should be run to the ballast tanks and they should be filled at the same time as the compartment is filled, in order to keep the ship on an even keel. When a ship is heavily loaded, the depth of water under her must be determined by taking soundings, for if she goes down from the water poured in and takes the ground she is bound to take a very short list one way or the other.

As a matter precaution, when operating in a burning



Everything But the Chimney Seems to Burn

A ship, when fully involved with fire, makes a smoky blaze. This is largely due to the insufficient supply of air furnished the fire within the body of the vessel. Note in the above illustration that the superstructure, mast, and other finishings are burning vigorously.

vessel, men should always operate in pairs in charge of an officer. In the dense smoke, always use a guide line which is also used as a signal line. A simple code of signals should be made up and practiced. Always leave at least one man with a helmet outside who will take and give signals and watch outside connections and report same to crew operating in vessel. All men operating within the vessel in a heavily charged atmosphere must be equipped with self contained breathing apparatus.

There may be hemp, jute, cotton or chemicals stored in the hold of the ship. The chief officer is responsible for the men. Hemp and jute makes no affect apparently on the men when fighting the fire, but they may drop after getting on the deck. Therefore be sure of what is in the compartments before you send the men down to put the blaze out. If you can't go down, can't send down, cannot find out what is in the hold, the next thing to do is to fill the hold with water.

Before this is done there is one important thing which must be remembered: There are usually bulkhead doors between the different compartments of the hold and which are water-tight. See that these doors are tight so that the water will not run away. Also be sure to take the men away when the compartments are filled up. The doors may give way and the damage would be terrific. When down to lock the door you may find you can use a stream. If such is the case, do so as long as you can. The following additional instruction on ship fires, from the New York Fire College Course, is the work of Deputy Chief Edward Worth in charge of the Marine Division, who has had probably more experience in handling ship fires than any other officer in the country.

How to Get Water Into the Hold

There is another way of getting water into the hold besides letting the lines down through the hatches and that is thorugh the ventilators. These ventilators are present in practically every ship and are used for ventilating the spaces below, especially when chemicals are stored there, to prevent dangerous gases from collecting. They are usually situated four or five feet after or before the bulkhead. Smoke from the ventilators shows where the fire is; the chart shows where the ventilator comes from. Put your lines through these openings and turn on the water.

In the case of single bottom on the ship, get engineers

There Is Plenty to Burn on the Average Vessel

This photograph of the Clyde liner "Seneca" which burned in December, 1929, at Hoboken, N. J., gives a good idea of the amount of combustible material available on the modern ship. It is not surprising that once fire secures a hold on such a vessel it completes its destruction.

Explosions Frequently Start Fires on Vessels

Here's an oil tanker, the Mantilla, in dry dock at Baltimore, Md., which burned following an explosion in 1926. The use of hot rivets, oxyacetylene torches or other sources of ignition are responsible for a great number of explosions in oil tankers. It only requires a source of ignition to "set off" the mixture of air and petroleum vapors in the double bottoms or tanks of such ships.

to open the seacocks. When there is enough water in the lower hold, close the seacocks. In case of fires in old fishing ships, there is usually no bulkhead, leaving a wide open space from end to end of the ship. In such an instance, there is only one thing to do: stop the fire before it passes you. If necessary, find out how much water the ship will draw and run the ship somewhere where you can sink it.

Once the fire in a ship has gained headway you know it will destroy the cargo and the ship. It is up to the commanding officer to decide what to do. If there are no bulkheads in the ship, you've got to lose either the ship or the ship and cargo. You get the ship and salvage if you sink it, while the boat may be so badly damaged by warping of plates that it will be worthless, if you try to put the fire out with streams.

Another thing to be remembered is this: When a ship is at dock or in the harbor and cargo has been removed for one consignee from the lower deck, the boat is apt to be top heavy and there is danger of it overturning. Use the water ballast tanks for aiding the boat to keep an even keel. Connect lines from the engine to fill up ballast tank.

There are many times when you can get at a fire from both ends. Where fire is in the center and ventilation is in the center, this is possible. Where the ventilation is at either end, there is danger of one company driving the fire against another company.

In any case, get ventilation and the men can work close up to the fire and accomplish effective results.

Occasionally the fire in a vessel can be located by the color of the hull plate. Plates in contact with the fire,

(*Continued on page 779*)

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

AKIN to looking for a needle in a haystack is the task of finding a hydrant in a dark locality where the color appears to blend with the background. In the daytime it is possible to spot hydrants near the curb with more or less ease, but in the night when headlights on fire apparatus cast deep, changing shadows on the road, the results are exasperating. It is particularly embarrassing to the officer in charge, because time is valuable.

Then again, it is important to know whether the department can obtain a good or a poor quality fire stream from the hydrant. Sometimes where there is a choice of two or more hydrants, a scheme of differentiating colors permits the best hydrant to be selected.

The problem in full is printed in the box on this page. In the box on the following page is the problem that will be treated in the next issue. Should you have a comment that you would like to make on the next question or if you have a problem that you would like to see treated in this department, write to the "Round Table Editor," FIRE ENGINEERING, 225 W. 34th St., New York, N. Y. There is no charge for this service.

Here Is the Problem

What color are your fire hydrants painted?

Are the hydrants marked in any way to determine the size of main to which they are attached, or to determine whether or not a good fire stream can be secured from them?

At fires, how do you determine which hydrants should be avoided and which should be used?

The Question

Red appears to be the predominating color, although there is a marked tendency to change over to yellow or a bright orange. Green is considered objectionable because its color blends with shrubbery in the ackground. Of the fifty-four chiefs who have discussed this question, twenty-three favor red paint for hydrants, thirteen are strong for yellow, bright orange and green drew six votes each, three each for black, and for aluminum, and one each for red and black, white, and lead. The replies follow:

J. T. McNulty, Chief, St. Petersburg, Fla.: We paint all of our hydrants yellow with aluminum or white enamel tops. This combination enables the firemen to locate a hydrant at night quite a distance away.

Hydrants that are painted green are almost impossible to find on a dark night due to the fact that the color blends with the shrubbery. To my mind it would certainly be worth while for any city using green paint to change the color to yellow.

Hydrant threads should be greased with a mixture of graphite and oil at least twice a year. This will be found to be a great time saver to the department.

We have not marked the hydrants with the size of the main though it is an excellent idea and we will have that done before the summer months are over. Lieutenants and captains should make a study of the hydrants in their districts in order to be able to supply the chief with the information as to whether or not good fire streams can be secured from them. In a city of fifty thousand and above the chief is compelled to rely upon his assistants for much of the detail information due to the fact that his mind is occupied with so many current problems. However the chief should know as much as possible about the water mains and the workings of the water plant.

The question of determining which hydrants to use at fires is a very complicated matter as there are so many different angles to be considered. Therefore existing conditions would govern my judgment in this matter. This is an instance where the chief officer present should know the condition of the water mains.

Louis Behrens, Chief, Charleston, S. Car.: All of our fire hydrants are painted yellow as this color gives greater visibility. Our hydrants are not marked as we have installed in each fire station a blueprint of the entire city (scale one inch to three hundred feet), showing the size of mains laid in various streets, the location of the hydrants, valves, etc. The fire alarm boxes are designated by red thumb tacks. This enables officers and men to familiarize themselves with the entire system. In addition to this, a copy is located in the chief's office and new locations for hydrants and fire alarm boxes can be decided upon at a glance.

Monthly inspection of all hydrants, as well as fire prevention inspection is made by officers and men. The total number of hydrants is divided into seven districts, the number of companies we have, and each company takes a turn in each district. As our rules provide that the first company to arrive at the fire take the nearest hydrant, next company the next hydrant, etc., the situation as created gives all the members of this department the opportunity to become familiar with the water supply system, and good results are obtained.

T. H. Shipman, Chief, New London, Conn.: Our hydrants are painted yellow for better visibility at night. The hydrants are not marked for the size of mains, but are marked to determine what service they are on. New London has two services of supply, one direct from the water supply which serves the lower part of the city, and one from a reservoir which supplies the higher section of the city. This latter supply serves those who cannot receive sufficient pressure from the direct service.

This marking is as follows: plain yellow indicates direct supply, large mains and over thirty-five pounds pressure; yellow with one black stripe around the top, direct supply but under thirty-five pounds pressure; yellow with black stripe below the outlets indicates reservoir, small mains but over thirty-five pounds pressure, and last, yellow with black stripe below the outlet and one above the outlet signifies reservoir supply, small mains, and pressure under thirty-five pounds. We avoid using the last two named hydrants as much as possible.

Geo. M. Mantor, Chief, Seattle, Wash.: Hydrants are painted green throughout the entire city at the present time. However, it has been proposed to the water department to paint the tops in outlaying districts chrome yellow. No action has been taken on this proposal.

Hydrants are not marked for grading although a proposal covering this is before the water department. The code suggested follows: "8-60," eight to represent the size of the main and sixty the static pressure (not flow). This marking would be white against the green gackground.

Robt. R. Leedon, Chief, Portsmouth, Ohio: We paint our fire hydrants yellow with aluminum or red tops. The aluminum signifies four-inch hydrant with four or five-inch connection to main, and sufficient flow. Hydrants

with red tops signify a four-inch hydrants with very ordinary pressure, sufficient for but one line. All hydrants that are to be avoided at fires are painted solid red, and are used only for very ordinary fires, such as trash, sheds, etc.

We locate connections and install our own hydrants. By this method we have been able to transform our hydrant system. In 1922 the hydrant system was very poor. We have 293 hydrants and only sixteen of this number had larger than four-inch connections to mains. Of this 293 we have replaced and junked seventy-five, and moved fifty-three to outlaying districts. We have also installed new hydrants until at the present time our system consists of 595 hydrants. Of this number 285 are four-inch; about twenty-five of them six-inch; 254 five-inch hydrants, with six-inch connections, and fifty-six are six-inch hydrants with eight-inch connections. Therefore, of our total number of hydrants, 335 have larger than four-inch connections to mains.

Every main in this department has knowledge of the water main layout and hydrant system, as we believe that any fire department is only as good as its water supply.

It has taken a great deal of labor to bring our system to its present standard, but it is well worth while, and is something every fire department should be interested in. Most water works officials are interested in domestic consumption while we are interested in the fire flows, which are many times greater than the flows for domestic use.

John L. Casey, Chief, Abington, Mass.: Our hydrants are painted black on the barrel and aluminum on the dome and water outlets. The aluminum is more conspicuous than any other color at night. However, it also has Its disadvantages in snow storms when the snow is deep and the barrel of the hydrant is buried.

Hydraunts are not marked to determine the size of the main to which they are connected. I have recommended to the commission that some sort of a color scheme be used for this purpose.

We have large maps in each fire station showing the size of the mains, location of the hydrants and the geographical elevations in different parts of the town. Flow tests are made and records of same are kept by the water and fire departments.

William H. Duval, Chief, Penn Yan, N. Y.: Our hydrants are painted red with white tops. The hydrants are not marked in any way. However, we have a six-inch main throughout the entire business district and a four-inch main in the rest of the village. The water pressure is 110 pounds at the highest point and from 130 to 140 in the lower section.

At the time of fire we can get good streams of water from any hydrant. Therefore no hydrants have to be avoided.

W. Ralph Williams, Chief, Fresno, Cal.: The bodies of the fire hydrants are painted aluminum and the tops red. The red is to conform with the state law requiring hydrants to be painted this color. The curbs are also painted red for a distance of ten feet each side of the hydrants. This is done to prevent parking of cars within this area. We do not mark hydrants in any way.

When a second or greater alarm is received, a hydrant inspector responds with the apparatus and confers with the chief on the size of the main.

Richard L. Smith, Chief, Pittsburgh, Pa.: We paint our fire hydrants red. However, we do not mark the hydrants to determine the size of the main. The necessity for marking them in any way to indicate the size of the main to which they are attached does not exist in our city to the extent that it formerly did as nothing smaller than six-inch mains when cross-connections are laid. All the four-inch mains are being replaced as rapidly as possible. However, where mains used of smaller size than six-inch, particularly if laid for twenty years or more, I think the idea of marking hydrants is splendid.

Here Is the Problem for the Next Issue

Do you consider over-insurance as one of the real causes of incendiary fires?

If so, what action would you suggest to remedy the situation?

Not many of the hydrants in this city have to be avoided at fires. However, every district has blueprint maps on file at the battalion chief's headquarters showing the layout of our entire system. At the request of company commanders these maps can be secured for study. In fact, it is the duty of all company commanders to know the size and condition of the mains in their respective districts.

Louis Locher, Chief, Springfield, Ohio.: Fire hydrants of this city have been painted red for years. Since being made chief of this department recently I have come to the conclusion that if the hydrants were painted a lighter color they would be more noticeable, especially on a dark night in the outskirts of the city.

Our fire hydrants are not marked in any way to determine the size of the main to which they are attached. We are familiar with the various sections of our city where good pressure is available or where low or medium pressure can be had.

In the event of a fire hydrant being out of commission or damaged in a minor way, each fire station is notified of the condition of the various hydrants that should be avoided in case of fire in this particular section.

G. W. Hedden, Commissioner, Buffalo, N. Y.: Our fire hydrants have heretofore been painted green, but are now being painted bright red. Our high pressure hydrants have formerly been red, but will now be painted a bright yellow or orange color.

We have no hydrants which should be avoided, as we have very good water pressure throughout the city, with from thirty-six to forty pounds pressure in the outlaying districts where there are dead ends. We have seventy-five pounds pressure in the downtown section. This is in addition to the high pressure system which covers the high value district.

C. Pritchard, Chief, Jackson, Mich.: All hydrants are painted bright red, and the hydrant caps are painted with aluminum paint. This makes a very conspicuous affair both day and night.

The water mains in the fire district consist of ten and twelve-inch and the residential district are mostly six inch. The pressure is maintained at sixty-five pounds. Each officer familiarizes himself with the location of the mains in the mercantile district.

Geo. P. Ebner, Capt., Carnegie, Pa.: Our fire hydrants are all painted red about twice a year. We do not mark the hydrants in any special way. We have two water lines in this city, and we know the pressures that the different fire hydrants have.

Every member of the fire department is required to know the location of fire hydrants and the pressure available at same.

W. R. Collin, Chief, Bristol, Tenn.: At the present time our hydrants are painted yellow. This seems to be the most satisfactory color. However, we have been discussing this question.

The hydrants are not marked in any way in order to tell the pressure available. However, we have plans under way by which we can distinguish the size of the mains to which the hydrants are connected. We plan to paint all the hydrant bodies yellow and the caps aluminum for large mains, all yellow for medium mains, and red for small mains and dead ends.

T. W. Alleman, Chief, Altoona, Pa.: All hydrants are painted green. The Pennsylvania Railroad Company have high pressure lines around their shops and these hydrants are painted green with red tops. All the hydrants have sufficient water supply. We therefore connect to the most convenient one at a fire.

Marvin A. Morgan, Chief, Faribault, Minn.: Fire hydrants are painted dark red. There is no way to know the size of main unless one is familiar with the mains in the various streets.

We use the hydrant nearest the fire. If the main is a small one and sufficient pressure is not available, we put on a pump. We have a 750-gallon pumper which responds to nearly every call.

(*Continued on page* 784)

To Reduce Losses, Increase Inspections!

No Amount of Fire-Fighting Will Ever Regain Property Destroyed by Fire—Fire Prevention Methods Safeguards Values

By W. D. BROSNAN, Chief of Fire Department, Albany, Ga.

WHEN a fire chief is successful in winning the award of the National Fire Waste Council for reducing fire losses for several years, it is evident that the methods followed are the proper ones. It is a case of practicing what one preaches. The following paper sohuld, therefore, be of interest and value to other members of the profession:

Chief W. D. Brosnan

The old adage, "An apple a day keeps the doctor away" can well be applied to the fire department in fire prevention, for just a little forethought and carefulness will prevent fires and keep the fire department away.

Practically all large corporations are spending lots of time, effort and money seeking to prevent accidents among their employees, and they find that it pays. Medical men and sanitary engineers are bending every effort towards the prevention of disease and the conservation of health, but thousands of lives and millions of dollars in property losses are our annual sacrifice to the flames.

Any person who is at all conversant with fire safety knows that at least eighty-five per cent. of this enormous total could be prevented. It is the duty of the fire chief to assume leadership and point out the way for the protection of life and the conservation of property of our citizens.

Every fire represents a loss, be it large or small, but there is no loss in the fire that is prevented from starting, through the exercise of methods of prevention.

If the fire loss of the country is to be reduced, we must get away from the out-of-date methods of the old time redshirt fire brigade. The old school thought the duties of the firemen was to sit around the engine houses waiting for an alarm of fire and then proceed to extinguish it as best they could; but the modern fire chief knows that he must be an aggressor to prevent fires from starting, if he is to be successful in reducing the loss.

I shall attempt to tell you how we are using practical methods of fire prevention in our city, and the results obtained. I shall ont deal in theories as to how fires might be prevented, but will tell you of how fires have been prevented.

The dear old American public prefers to be led instead of being driven, so in the enforcement of building and fire regulations it is well to avoid harsh measures until persuasion has failed. The fact that laws give you authority is no reason why a citizen should be handled harshly if he fails to comply with regulations. Just a little tactful handling and explanation of the need for the regulations will, in ninety per cent of the cases, convince the citizen who is at fault that the department is working for his interest and safety. When you do that, you gain a booster for safety and get the co-operation, instead of antagonism of the public.

Educating the Public

Fire prevention is largely a matter of educating the public. It is essential that you get the message before the citizens of the community as often as possible. Talks before civic clubs gain their support and help in the campaign of education Fire prevention talks should be made in all schools during clean-up week in the spring and fire prevention week in the fall. On both of these occasions, home fire inspection questionnaires should be furnished the pupils, so that they can personally inspect their homes and make a report in writing covering conditions existing therein. In this way, we get fire prevention into the home and bring it to the attention of the housewife. Competitive essays on "Fire Prevention" by school children bring about good results. Paid advertising brings unsafe conditions to the attention of certain people who cannot be reached otherwise. The ministers will gladly co-operate in a campaign of publicity when you explain to them the sinful waste which, through carelessness, causes fires that snuff out lives and destroy property. All of these agencies will assist in the publicity campaign and will back you up in the enforcement of regulations that will gain results.

Every fire should be carefully investigated to determine the cause. If the cause is known, you can apply prevention methods.

The first step in actual fire prevention is the adoption and enforcement of safe building regulations. Many a city has an ideal building code, which is not enforced, or possibly enforced against the cobbler but not the banker. Strict compliance with the code is most essential if you are to get anywhere in the prevention of fires.

Protection of Public Buildings

Public buildings should have ample, easy exits, to safeguard life—should be as nearly fireproof as possible, and protected with automatic sprinklers.

Schools should be fireproof when more than one story in height. The furnace room should be cut off from the rest of the building, and fire drills should be held semi-monthly.

Mercantile and factory buildings should have standard walls; exposures should be protected by metal doors and wire-glass windows, and automatic sprinkler protection should be required in certain classes of risks.

Dwellings should have fire-retardent roofs.

All buildings should have safe chimneys and roofs; heating plants and electric wiring should be installed in a safe manner and maintained safe through constant inspection.

"IN my city we maintain a night patrol by uniformed firemen. One man is detailed from each company for this service, and a uniformed fireman equipped with a good electric lantern, looks into every mercantile establishment once every hour during the night. Last year this patrol discovered more than eighty-five per cent of the fires in the mercantile district. The department was enabled to extinguish the fire with a minimum loss."

Fire inspectors must constantly study fire hazards if they are to keep abreast of the times. In these days of modern conveniences, fire hazards will develop unless safe regulations for their installation and maintenance are adopted. We have many automatic devices that work fine when first installed, but require constant inspection and supervision to keep them automatic and safe.

Inspectors must have a practical working knowledge of electric wiring, for in all classes of buildings the electric circuits must be checked up to see that the fuses are not bridged, and that circuits are not overloaded. We so often see a first-class electrical job that has been made unsafe through changes or additions of some novice.

Heating plants are next in importance. All chimneys should be built from the ground and lined with terra cotta flue liner. Proper air space should be allowed between the chimney, or flue, and all woodwork.

Watch for X-Ray Film

When inspecting public buildings, churches, schools, hospitals, and lodging houses, care should be taken to see that all waste material which might start a fire or cause a fire to spread rapidly is removed from the premises. No chemicals of a combustible nature or volatile nature should be allowed stored therein. In hospitals, carefully inspect the X-ray filing rooms, to see that the firms used are of a non-explosive type. Exits should be kept in repair, properly designated and unobstructed.

Inspections in mercantile risks should cover elevator and stair openings, to see that they are cut off and properly functioning. Investigate the handling and disposal of packing and waste materials, and where it is necessary to store packing materials on the premises, metal cans or metal-lined boxes should be required to care for same.

Sufficient aisle space should be allowed, and advice given on the piling of stocks or storage of stocks, so as not to hamper the fire department in case of fire. A close check should be made to see that combustible chemicals or volatile liquids, if allowed in the building, are handled in a safe manner. In gasoline filling stations and garages, visible containers should remain empty except when actually serving gasoline.

Factory inspections should cover exits, hoist and belt openings, and cleanliness. A clean factory seldom burns. It is not sufficient to clean up at the end of the day's work, for there may be a fire during working hours. Factories should be maintained clean at all times; waste material should be removed just as soon as it becomes waste; floors should be kept clean, and the premises tidied up. This not only keeps the plant safe, but also makes for increased production and plant efficiency.

Hazards in furniture factories and paint shops have been greatly increased through the introduction of pyroxalin lacquers in painting, but these places can be made reasonably safe by the construction of special compartments that are properly ventilated and equipped with automatic foam chemical equipment.

Next we come to fire prevention in the home. We still maintain that when a dwelling has a fire-retardent roof, properly constructed chimneys, safe electric wiring, and properly installed heating equipment, there is practically no excuse for a fire, if only a little carefulness is practiced.

The wood shingled roof should be outlawed in every self-respecting community, for there is no way in which a fire can be prevented on a wood roof except by the elimination of it.

Home Furnaces Hazardous

There is a tendency to place Arcola furnaces and large heating stoves in alcoves. This not only increases the heat efficiency, through the non-circulation of hot air, but is highly dangerous for the reason that hot air banks up in the alcove and is sufficiently hot to ignite the woodwork or the wood laths back of the plastered walls. Too much care cannot be given to the inspection of flues that are designed to care for either Arcola or Heatrola equipment, because the furnace or stove connects directly with the flue and allows the flame to enter therein; and if there is not an air space of at least two inches properly vented between the flue and the woodwork, you will surely get a fire.

Attics should be cleared of old broken furniture, and all waste material should be removed from the premises. Volatile liquids should not be used for cleaning in the home. The tendency to use oil heating brings up a new problem for the fire department. Automatic oil-heating devices work fine when first installed, and are fine conveniences, but are unsafe if not properly supervised. These devices should be constantly inspected to see that the automatic features are in proper adjustment, because if rigid regulations are not enforced, trouble will surely follow. Provision should be made in the fire regulations of a city to give fire inspectors the right to enter any premises for the purpose of making fire inspections at any reasonable time, and they should be empowered with authority to order corrections of hazards, if need be.

Public buildings, mercantile establishments and factories should be inspected once each month by uniformed firemen, who should make a report in writing on a suitable fire-inspection blank. This report should be most complete, for the information therein contained will be of great value to the Fire Department in extinguishing a fire, should one occur.

Hazard of Home Mechanics

Dwellings should be inspected annually, and complete reports on the condition of them should be on file at Fire Department headquarters. This gives the Fire Department a fine opportunity to confer with the housewife and advise her of the common hazards of fire in the home.

People like to make changes in their homes. In lots of instances the change is apparently so small that the Building Department is not consulted or a permit obtained. In this manner, homes that were constructed safe are made unsafe. The ordinary housewife can see no harm in punching a hole in a chimney and inserting a stove-pipe, but in a great many instances, this is a dangerous procedure. In making dwelling inspections, see that worn-out smoke pipes are replaced, and see that the numerous household electrical appliances are handled in a safe manner.

In my city, we maintain a night patrol by uniformed firemen. One man is detailed from each company for this service, and a uniformed fireman, equipped with a good electric lantern, looks into every mercantile establishment once every hour during the night. Last year this patrol discovered more than eighty-five percent. of the fires in the mercantile district, and through proper reception of the alarm the Department was enabled to extinguish the fire with a minimum loss.

Fire Patrol Ever Watchful

This fire patrol is also of inestimable value in preventing arson. The method we employ for preventing arson or crooked fires is as follows: When we have information that a mercantile business is in financial difficulties, we inspect that risk once a week, check up on the amount of insurance carried, and if the establishment is over-insured we request the insurance agent to reduce the line. The insurance companies will cooperate with you in this respect, for they are afraid not to. The fire patrol is given a tip to keep an extra-watchful eye over these supposed "hot spots." In this way, we have a check-up every hour during the night, and it would be a risky business to attempt arson. Through this method, we send them to the bankruptcy courts instead of to the insurance companies for relief.

As an example of what can be accomplished in the prevention of fires, I submit you figures taken from the records of the city that I have the honor to represent:

Year	No. of Fires
1923	160
1924	159
1925	127
1926	110
1927	97

When you consider that my city has increased at least forty per cent. in population and property under protection during this time, this showing is all the more remarkable.

If, when you first start your fire-prevention efforts, you do not get immediate results do not let it discourage you. It takes years of intensive work to educate the public in fire prevention. So do not be discouraged; carry on, and in the end you will obtain results that will be most satisfactory.

(Paper presented at convention of the Southeastern Fire Chiefs Association)

Binghamton, N. Y., Wants Stronger Code—An ordinance has been introduced in Binghamton, N. Y., that would give the fire department power to enter buildings and to order corrections where fire hazards exist.

Firemen Travel to Convention by Airplane—Nassau County, L. I., N. Y., firemen traveled by airplane to attend the convention of the New York State Volunteer Firemen's Association at Saranac Lake, N. Y. Four large planes were chartered for the trip.

Two Firemen Killed in Apparatus Plunge—Two firemen of Media, Pa., were killed and another critically injured when a fire engine crashed a bridge, while on the way to a fire. One truck had gone safely over. The second apparatus, a new pumper, could not straighten out after making a turn for the approach to the bridge, and crashed through the wooden railing.

WITH THE EDITOR

New Fire Hazards From Aviation

The steady increase in the use of the airplane and the dirigible airship and the prospect that it is only a matter of a short time when these devices will be in common use, brings to the fore an entirely new class of hazards for the Fire Department to cope with.

Of course, the principal danger will be the falling of a flaming plane upon a residence or in a thickly settled business section, in which, often, the structures will be ancient, delapidated and inflammable. Such an occurrence, while at the present time unusual, is by no means impossible. In fact, quite recently, the house of the Governor of New Jersey was quite badly damaged through a similar happening. While, in this instance, fortunately, the plane did not catch fire, yet that might easily have happened from a broken gasoline line, ignited by a spark from the running engine. And the result would have been the destruction of the residence.

A rather bad forest fire occurred a few weeks ago from a plane falling among some brush, and the resulting blaze leaping into intensity before the nearest fire fighting force could be summoned into action.

Other dangers in this connection arise from lighted objects, carelessly thrown from low-flying planes, falling upon wooden roofs, awnings or other inflammable portions of buildings. No doubt, as time goes on, and the use of the air for transportation becomes more general, stringent regulations will be adopted and enforced to take care of these matters.

In the mean time, the matter should be carefully threshed out by Chiefs both individually and in the conventions of associations, so that when time for official action on the subject arrives there will be unanimity as to what regulations are needed.

Upholds Fire Commissioners in Refusal of Permit

An important decision, which should have an effect upon similar actions in other states, has just been handed down by a judge of the Superior Court of California. The owners of the structure involved, which was situated in the city of Los Angeles, had applied for an obtained permission to use the building as a garage, among other purposes, from the Board of Building and Safety Commissioners. However, the Board of Fire Commissioners refused to issue a permit, on the ground that the use of the building for this purpose would constitute a fire hazard. The parties then sued for a writ of mandamus to compel the Fire Commissioners to issue the permit, on the ground that the Safety Commissioners had already granted the permission.

The decision of the judge was that in the matter of what constitutes fire hazards the Fire Commissioners were the final arbiters. This decision was not only eminently wise and just, but also was in the interest of public welfare and safety. The promiscuous use of buildings unsuited for the purpose for garages should be forbidden by law, but where discretionary powers in this regard are vested in Fire Commissioners or the Chief of the Fire Department, the decision by them should be considered final and binding. This is especially the case where attempts are made to install public garages in the lower parts of structures housing families or in which human beings sleep.

In such cases, where inflammable materials are contained in the automobiles and where the floors of the garage are apt to be oil soaked, the risk to human life is too great to allow of any sleeping quarters to be installed above, and if it is proposed to install a public garage in the lower floor of any building containing sleeping quarters, the permission for such change should be promptly refused.

If the Fire Department officials are vested, as in the case in point, with discretionary powers, there is little doubt but that such dangerous installations will be entirely done away with. It is therefore a matter of congratulation that the decision of the California judge has established so important a precedent.

Protecting Towns Situated in Forest Areas

Cities and towns which are surrounded by or are in close proximity to forest land are subject to fire hazards from which other municipalities are free. These are the perils from quickly spreading forest and heavy underbrush fires.

In the past unusually dry season which afflicted many sections of the country, especially in the East, this danger has been greatly aggravated. There have been instances where small cities and towns have barely escaped total destruction by the closest margin. An example of this occurred recently in the small community of Mill Valley, which is situated on the slopes of Mount Tamalpais, near San Francisco, Cal. Only through the services of the Fire Departments of several of the surrounding cities and towns, assisted by a huge army of volunteers, was the town saved, after a battle with the

flames lasting over three days. As it was a change in the direction of the heavy gale prevailing during the blaze apparently had much to do with saving the community from destruction.

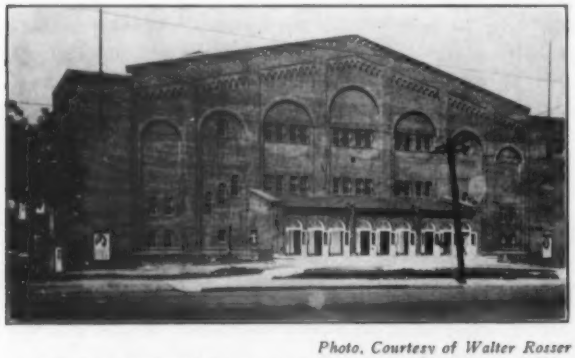
The science of forest fire fighting requires special methods and special tools. Picks, shovels, brooms and pails must be utilized, fire breaks of considerable width must be established, by clearing away the trees and inflammable underbrush along the line of greatest danger. In the case of the Mill Valley fire, these fire breaks were apparently not made of sufficient width, as in many instances the flames leaped over them and continued irresistably toward the endangered town.

No doubt the experiences of many such communities in the past season will prove of great benefit to those who are responsible for the protection of municipalities which border upon heavy forest lands. Such experiences and particularly the methods employed to combat the flames are worthy of broadcasting so that as much useful knowledge as possible can be diseminated upon the subject.

I. A. F. C. Announces Program

Many interesting topics will be presented at the coming convention of the International Association of Fire Chiefs, Birmingham, Ala., October 22-25. One session has been set aside to consider problems of interest to volunteer fire departments.

Chief James J. McMillan, Orange, N. J., will speak on "Mutual Aid Between City Fire Departments;" Chief Charles A. McGinley, East Orange, representing the New Jersey Fire Chiefs Association, "Multiple Systems of Refrigeration;" Frank McAuliffe, chief of Salvage Patrols, Chicago, representing the Great Lakes Association of Fire Chiefs,



Photo, Courtesy of Walter Rosser

This Is Where the I. A. F. C. Exhibits Will Be Held

The Municipal Auditorium has been secured for the display of exhibits of the International Association of Fire Chiefs convention in Birmingham, Ala. The auditorium is but three blocks from the Hotel Tutwiler, and six blocks from the Hotel Bankhead-Leland, headquarters for the Eastern Regulars. About three thousand persons are expected to attend the coming convention in Birmingham, October 22-25.

"A Study of Running Card Assignments;" G. H. Carlin, Chairman, National Fire Waste Council, "State Fire Colleges;" Chief R. J. Scott, Los Angeles, First Vice-President I. A. F. C., "Carbon Dioxide Gas as a Fire Extinguishing Agency;" Chief J. E. Buchanan, Winnipeg, Manitoba (for Chief James Armstrong) of the Dominion Association of Fire Chiefs, "Fighting Fires in Extreme Cold Weather."

At the round table discussion, Chiefs Ross B. Davis, Philadelphia, Charles W. Ringer, Minneapolis, and Frank C. McAuliffe, Chicago, will consider the ten outstanding and most unusual fires of the year.

Five interesting talks have been arranged for men in charge of volunteer departments, as follows:

Chief J. E. Taplin, president Southwestern Association of Fire Chiefs, "The Organization and Discipline of a Volunteer and Part Paid Fire Department"; Chief E. F. Coop, president Pacific Coast Association of Fire Chiefs, "Value of First Aid in Fire Department Operations"; Chief John Monroe, Savannah, Ga., representing the Southeastern Association of Fire Chiefs, "Outside Aid to Rural Communities"; Chief Oliver Sanborn, president New England Association of Fire Chiefs, "An Analysis of Fire Losses."

There will be discussion as each paper is presented.

The Tutwiler Hotel will serve as convention headquarters. The opening session will be held at the Masonic Temple in order to accommodate the usual full attendance of members and their guests. Exhibits will be displayed at the City Auditorium.

Hotel rates at the Tutwiler for single room and bath is $3.50 and $4.50 a day; double room and bath, $5.50 and $6.50, and with twin beds from $6.50 to $9.50. At the Redmont Hotel the rates are single room and bath, $3.50 and $4.50; double room and bath $5.00 and $6.00. At the Bankhead-LeLand Hotel, single room and bath, $3.50 to $5.00; double room and bath, $5.00 to $7.00. This hotel is the convention headquarters for the Eastern Regulars. The Thomas Jefferson, a new hotel, will probably be completed prior to the convention and rooms will be available there. At the Molton Hotel and the Hillman Hotel, single rooms without bath, are from $2, and with bath from $2.50.

The New England Association of Fire Chiefs will leave Boston in a special train, October 20 at 9:25 a.m. Those wishing to join this party should write to George F. Cobb, 774 Albany St., Boston.

Airplane Brings Food to Stranded Firemen

While fighting a forest fire near Tacoma, Wash., a group of men were cut off from their food supply. Two lots of approximately 150 pounds of food and blankets were dropped from a forestry patrol airplane, and it is believed that this is the first time that a forestry plane was put to such use.

Landing fields are being established in national forests as part of the program to utilize airplanes in fire control work. E. J. Fenby of Tacoma, supervisor of Rainier National Forest, has announced the establishment of a landing field approximately 1400 feet long by 300 feet wide. The field will shorten each trip about 100 miles for forestry observers, who have been taking off from the Municipal Airport at Tacoma.

An adequate system of protection for all state and private forest land is the aim of the Federal Government, which is assuming approximately one-fourth of the cost, while the state and timber land owners make up the balance.

The Washington Forest Fire Association, a co-operative organization of 268 individuals and corporations, is supplementing the work of the State Forest Service and the United States Forest Service.

Pennsylvania Motor Club Aids Firemen—Steps have been taken by the Pennsylvania Motor Federation to eliminate the tendency on the part of some motorists to race fire apparatus and refuse to yield the right of way. Concerted action will be taken by the association to eliminate this trouble, and to educate the motorist of the accidents that may result.

Mack Truck Building Destroyed in Newark, N. J.

An acetylene torch in the hands of a workman started a fire that destroyed the $500,000 commercial truck service building of the Mack-International Motor Truck Company in Newark, N. J. Two employees and two firemen were hurt. Many hose lines were used.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Air and Water Pressures

To the Editor:

I would greatly appreciate your answering the following questions for me:

What danger, if any, could be looked for by keeping nozzle closed when water is turned on, say in a 400 foot line of 2½-inch hose?

Would the compressing of air under the above conditions have greater presure in the hose than if water was allowed to fill line completely before shutting nozzle?

Could this first method, with approximately 100 pounds pump pressure, blow a properly secured coupling from a 2½-inch line with more ease than this same pressure with a loaded line, nozzle closed?

Respectfully, N. C.

Answer: If a line laid horizontally were charged with air under 100 pounds pressure, the strain on the couplings and on the hose would be precisely the same as where charged with water at the same pressure. It is assumed in this case that the hose is air tight, as is also the nozzle.

There might be some danger of blowing off a coupling, particularly near the nozzle, should a line filled with air under pressure, created by water pressure from hydrant or engine, be suddenly opened up. The air would be released so much more quickly from the nozzle than would water, that there might be a severe water hammer upon the water, following the air, reaching the constricted passage represented by the nozzle. In other words, the air would so quickly exhaust that the rush of water upward might create this hammer when suddenly checked in its flow by the smaller diameter of the nozzle. There is one case in which air trapped in a line of hose would exert greater pressure than would the water which created the pressure. It is where the line is stretched up in a building and the air is trapped in the upper part of the line. In this case there is practically no back-pressure due to the elevation of the nozzle, so that the pressure at the street is transmitted without appreciable drop right up to the nozzle. On the other hand, if the line should be fully charged with water, the back pressure created by the elevation of the nozzle would diminish the pressure at the nozzle in proportion to its elevation.

Engine Pressures and Steam Range

To the Editor:

Will you please set me right on the following questions:

In order to reach the top of a derrick or tower of a certain height with an effective hose stream, I would proceed as follows:

Lay two 400-foot lines of 2½-inch hose siamesed into a deluge set with 1¼-inch tip. 750-gallon pumper employed. Engine pressure 147 pounds, nozzle pressure 90 pounds.

If the above layout is correct, what will be the result of changing it to the following:

Hose layout same as before, except that two pumpers, one of 750 gallons and another of 400 gallons capacity, will be employed, each pumping through separate line of hose. What is the engine pressure of each, and also what quantity of water will be delivered by each pumper? What is the nozzle pressure?

If pumper is operating with vacuum thereon and your supply of water is limited and you fail in your efforts to reach a fire with a hose stream (line equipped with 1-inch nozzle), closer approach to the fire being impossible; what change in layout would you make in order to get stream on fire? C. F. W.

Answer. With the layout given, and 90 pounds at the nozzle, the engine would be pumping 438 gallons at 140 pounds pump pressure. Pump pressure is secured by Underwriters' formula,

Engine pressure = N. P. × (1.1 + KL).

Where nozzle pressure is 90 pounds, K for two parallel lines of 2½-inch hose fitted with 1¼-inch nozzle, is .066.

L is the number of 50 foot lengths of hose in either line or 400 ÷ 50 = 8.

Then E. P. = 90 × (1.1 + .066 × 8)
= 90 × (1.1 + .528)
= 90 × 1.628
= 146.52 or 147 pounds.

Now, if the layout is changed so that two engines do the pumping, one through each line, and one engine has a capacity of 750 gallons and the other 400 gallons, the nozzle pressure and discharge will be precisely the same if the 147 pounds is maintained at each engine.

Ordinarily where two engines are pumping through parallel siamesed lines, the pressures at the two engines are maintained at the same figure. If they are in this case, the nozzle pressure will be 90 pounds and the discharge from each will be 219 gallons per minute. Either of the engines should be able to discharge 219 gallons per minute at 147 pounds.

Of course, either engine can be made to deliver more by increasing its pressure above that of the other, but this is not commonly done in layouts of this sort. So if the pressure at each engine is the same, each one will discharge the same amount of water.

With reference to your other question, if the stream from one-inch tip will not reach the fire, and a closer approach is impossible, also, pumper is taking all the water that is available, the only thing to do to get greater range is to reduce the size of tip. By putting on a ¾-inch tip you will probably be able to get the range desired, as well as keeping within the limit of the supply of water available.

Drafting Water

To the Editor:

Will you kindly answer the following questions:

Which is the more difficult to accomplish and why: (please deal in exact figures) to draft water 10 feet or 20 feet? Give the pressures and inches of vacuum for each and explain the difference.

In drafting, the pump eliminates the atmospheric pressure in the air (sea level, 14.7 lbs.) from the suction hose, causing the atmospheric pressure on the waters surface to force the water in the inside of the suction hose to a certain level. A strain is placed on the pump while performing the above operation. After you get the water in the pump, does the strain on the pump cease insofar as the drafting of water is concerned?

Does the pump have to hold the vacuum after it gets the water? If not, is it a siphoning effect that delivers the water to the pump? T. K. V.

Answer: With regard to your first question, it is harder for an engine to draft water 20 feet than 10 feet. To lift water 10 feet requires a vacuum of 10 x .434 or 4.34 pounds, assuming that the suctions mentioned are air tight.

To lift water 20 feet, requires a vacuum of 8.68 pounds.

These figures are secured by multiplying 10 and 20 respectively by .434.

If the suction pipe is small and the quantity of water discharged is large, there will be a friction loss here which will increase the vacuum. However, the size of the suction is not known, so that only the figures for vacuum due to the lift are given.

With reference to your second question, the strain placed on

the pump by the lift at suction is constant while the pump is operating. Unless the discharge hose were laid down an incline, such as to create a siphon, the pump would have to lift the water the given height all the time it is in operation. It is very seldom that the layout is such that the source of supply is so elevated that such a siphon can be produced by suction and discharge hose.

Eliminating Radio Interference

To the Editor:

The generator for the fire alarm system causes considerable interference in our all-electric radio.

Can you tell us how to ground the generator or do you know of any device or attachment that will eliminate this trouble?

An early reply will be appreciated.

T. A.

Answer: An engineer of The Gamewell Company recommends the use of the Tobe Interference Filter to remedy the above trouble and says: "We can recommend this equipment as being the best on the market, but of course cannot guarantee that it will effectively prevent all interference."

The following data on the above is taken from a descriptive folder on this particular filter outfit.

The Tobe Interference Filter may be had in two sizes—No. 1 and No. 2.

Size No. 1 is intended to be connected directly to the interfering appliances (up to and including ¼ H. P.) and not to the radio set. In the case of motors, it should be cut in close to the brushes. Wiring diagram accompanies outfit.

Attractive Fire Alarm Station at Huntington, W. Va.

An artistic and modern fire alarm central office has been opened in Huntington, W. Va. The upper photograph shows the building's exterior, while the lower view is of the Gamewell equipped central. In the station are three 10-circuit storage battery switchboards, five 4-circuit box line relay boards, one 4-circuit primary alarm board, one 4-circuit secondary alarm board, one 38-circuit protector board, one 10-circuit automatic repeater, one ten circuit semi-automatic repeater, two repeater switching panels, a 60-circuit terminal cross connecting board, transmitting and recording sets, and other equipment.

Size No. 2 is designed for house elevator motors, motor generator sets, and other types of interfering electrical apparatus too large to be handled by the No. 1 Filter, and will handle motors and other appliances up to 5 H. P. at 220 volts.

Outfits are built in accordance with code requirements.

How High Can Pump Draught Water?

To the Editor:

Will you kindly give the solution, also an explanation, to the following problem.

To what height will a pump draft water with the vacuum gauge reading 18 inches?

I thank you in advance.

B. D. L.

Answer: One pound pressure per square inch represents 2.036 inches of mercury. On this basis a pressure of 10 pounds per square inch would represent 20.36 inches of mercury.

The 18 inches of mercury on the vacuum gauge to which you refer may be changed into pounds pressure by dividing by 2.036.

Eighteen divided by 2.036=8.84 pounds per square inch. This latter figure represents the vacuum created in pounds per square inch.

One pound pressure, or vacuum, will raise water 2.304 feet vertically. 8.84 pounds will thus raise water a vertical distance of 8.84 x 2.304, or 20.36736 feet. This is the height to which water may be raised by a pump the vacuum gauge on which reads 18 inches.

Rescue of Children, Etc.

To the Editor:

We will appreciate it very much if you will answer the following questions in an early issue.

Question 1. What is the best method to go about saving small children from a burning two or three-story school building with no fire escapes.

Question 2. What would be the pressure at a 1¼-inch nozzle on the end of a line of 2½-inch hose 1,000 feet long.

What would be the pressure on the same layout with 1⅛-inch nozzle, the engine pressure remaining 300 pounds.

R. O. A.

Answer 1. This would depend entirely upon the location of the fire, its extent, and the exit facilities available within the building such as stairways, spiral chutes, etc.

Where a large number of children are present, it is always best to endeavor to save one of the stairways for exit, keeping all hose lines off the stairway and if possible keeping the stairwell clear of smoke. This can be accomplisehd by bringing lines in at points of vantage on the upper floors by way of ladders, and providing ventilation over the stairwell by opening up the roof above the well. In such operation firemen must be stationed along stairway, and particularly at landings to keep the children calm and to expedite their movement. The rescue of a large number of children by means of ladders is a slow process and would normally be resorted to only in the event that stairways and fire escapes were so involved by fire as to make them unavailable.

If plenty of men are available at the fire, and if life nets are at hand, they can be used to good advantage in getting the children to safety. It requires, however, the assistance of men on the floors from which the children are jumping to so direct and assist the children as to prevent accident and eliminate unnecessary delay.

Of prime importance is the having of men on the floor with the children to keep them from becoming panic stricken.

Answer 2: The pressure at the 1¼-inch nozzle on the end of a 1,000 foot line of 2½-inch fire hose, the engine pressure being 300 pounds, would be slightly less than 50 pounds.

Where a 1⅛-inch nozzle is used under identical conditions, the nozzle pressure would be slightly less than 70 pounds. In other words there is a gain of 20 pounds in the nozzle pressure by using the smaller size tip.

Catskill, N. Y., Orders News Fire House—A contract has been awarded for a fire house to be erected in Catskill, N. Y.

Bangor, Me., Has New Apparatus—A city service ladder truck has been delivered to Bangor, Me. It is equipped with smoke and gas masks, and other life saving equipment.

SIXTY-ONE TONS OF FOAM POWDER USED IN FIGHTING OIL WELL FIRE

Twenty-seven Day Fight Necessary to Control Fire at Santa Fe Springs—Tunnel Dug to Casing of Well to Get at Fire

THE McKeon well, one of the many in the Santa Fe Springs, Cal., oil field, broke into flames June 10, and burned continuously for twenty-seven days before it was extinguished.

Oil workers placed shields of cast iron between themselves and the burning well to permit them to place a flow line from the well to tanks two blocks away. This blaze was a gas and oil fire—one of the most dangerous. At such a blaze there is the continual hazard of the oil boiling over and setting fire to nearby structures. There was not complete combustion of the oil and gas so that the unburned oil fell to the ground and collected in pools about the fire. After a while the oil started to flow and became ignited. To control this burning oil, a dike was built around the fire. Pumps were placed on the outside to pick up the oil that was not burning.

Burning Well in Distance

Intense heat made close approach impossible

Sixty-one tons of Fomon foam powder was used through eight generators, and was successful in controlling the fire, until the flow through the well casing was checked.

Three crews of men worked in eight hour shifts at a tunnel to the well casing. The tunnel was started by digging a hole about fifty feet square and thirty feet deep. On the side next to the fire, fifty-five feet away, a shaft six by four feet was dug. Other difficulties were encountered

Oil Fire Which Started in the Center of the Santa Fe Springs, Cal., Oil Fields

when the casing was reached, because of the oil seeping in from above. Foam lines were laid to the entrance for emergency.

The casing was tapped with one 2½-inch flow line so as to allow the gas and oil to flow from the well before reaching the fire. It did not permit the men to get close enough to work. Another 2½-inch tap was made and this lessened the presusre on the line and the men could work from fifteen to twenty minutes at a time. To tap the casing again would have weakened it; so then if the master gate was closed there would have been a great danger of the entire casing being blown out.

The greatest delay was in digging the tunnel and cementing the sections of pipe.

Tide is an important factor in such fires. At high tide the fire burns with more intensity. With matters in favor of the firemen, two foam lines and a water curtain for the shield as protection, men went up to the fire and cleaned the carbon that had collected on valves. The valve was closed and the fire was killed.

In fighting this fire it was necessary to erect an eight-foot dyke about the well. The chief problem was to keep this fire within the dyke. Both water and foam were used to accomplish this.

When the fire started, a fire committee was formed consisting of representatives from the different companies operating in the field, and a fund of $250,000 was subscribed to pay for fighting the fire. Roads had to be built into the fire area, derricks were torn down and destroyed, caterpillars and steam shovels were used, and large amounts of foam powder used.

Another New Bronx Apartment Fired

Five alarms were turned in to fight a fire that developed in a 105-family apartment house in the course of construction in Bronx borough, New York City. It was the eleventh fire in two months that broke out in uncompleted buildings.

When discovered, the fire was burning briskly in three separate places, and this fact has given foundation for the theory that the blaze was the work of some incendiary.

Eleventh Building in New York City to Burn While in the Course of Construction

Sixty-six laborers who were working in the building at the time reached the street safely.

All of the brick work had been completed and steamfitters and room finishers were on the job at 4:30 p.m. A mechanic who went to the third floor, discovered the blaze. He ran to the street to turn in an alarm, and warned the other men in the building.

The multi-alarms brought Fire Commissioner John J. Dorman, Deputy Chief Curtin, Assistant Chief "Smoky" Joe Martin, fifteen engine and six ladder companies.

Uncovered lath and seasoned timber made it possible for the flames to spread rapidly. A spark from this blaze set fire to a building of the Catholic Protectory, a mile away.

Fire Bureau Wanted for Dutchess County—A move has been made to establish a fire bureau for Dutchess County, N. Y.

E. Liverpool, O., Plans Delayed—Action concerning the construction of a central fire station for East Liverpool, Ohio, has been delayed.

Castro Valley, Cal., to Have New Station—A new fire house will be built in Castro Valley, Cal. It will be of brick construction.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands.

Week Ending August 23

GAYS MILLS, WIS.—Several business establishments..... 65
!!EATON, MD.—Butterfield Canning Plant..... 45
OSTERVILLE, MASS.—Summer residence of Mrs. F. G. Crane..... 45
SUFFIELD, CONN.—Shed of American Sumatra Tobacco Co..... 35
MINOT, N. D.—Plant of Piper Howe Lumber Co..... 25
CHICAGO, ILL.—Manufacturing building, 161 Jefferson St..... 80
BAY VIEW, WIS.—Plant of Wis. Malleable Foundry Co..... 400
ASHEBORO, N. C.—Plant of Asheboro Chair Co..... 40
TOWANDA, PA.—Several bldgs. on Bradford Co. Fair Grounds..... 40
MANITOU, MAN.—Ogilvie Grain Elevator No. 34, adj. property..... 50
PORTLAND, ME.—Emery Waterhouse Co. store..... 45
LIGONIER, PA.—Five business buildings destroyed..... 200
CRESAPTOWN, MD.—Farm bldgs. of B. A. Mason..... 65
VANCOUVER, B. C.—Whse. occupied by Western Oil Co..... 300
FORT WORTH, TEX.—Educational bldg. of Baptist Church..... 300
ASHEBORO, N. C.—Plant of Home Building, Inc., destroyed..... 200
LLOYDMINSTER, SASK.—Several business bldgs. 800
HULL, TEX.—Well No. 68—Republic Production Co..... 200
NATCHITOCHES, LA.—Wholesale grocery destroyed..... 80
SOUTH ACTON, MASS.—Barn on farm of Geo. Sisson..... 25
GREAT BARRINGTON, MASS.—Bldgs., estate of H. M. Smythe 25
OMAHA, NEBR.—Elevator of Trans-Mississippi Grain Co..... 400
NASHVILLE, GA.—Business property of Fisher Gaskins..... 25
HAMILTON, ONT.—Garage occupied by Toronto Transportation Co. 30
MACOUN, SASK.—Town hall and Dean Bros. garage..... 25
ROCHELLE PARK, N. J.—Garage owned by Sandow Brass Co... 250
GLENFIELD, N. Y.—Garage of Wm. Herrich, adj. property..... 150
NEW ORLEANS, LA.—U. S. Government bldg..... 50
WAXAHACHIE, TEX.—Walter Music Shop, adj. bldg..... 40
BUTTE, MONT.—Residences, 1127-1145 Antimony St..... 25
ELECTRA, TEX.—Several residences destroyed..... 45
NEWCASTLE, IND.—Plant of Danis Foundry..... 45
LAWTON, MICH.—Whse. Michigan Central R. R..... 45
LAKE WALES, FLA.—Hillcrest Lodge, 6 mi. south..... 25
LITTLE RIVER, MASS.—Summer Home of Chas. B. Almy..... 30
MEDFORD, MASS.—Whse. of Machling Bros..... 25
ALBERT LEA, MINN.—Midway Motor Co., adj. property..... 80

Week Ending August 30

SAN FRANCISCO, CAL.—Sales Rooms, R. A. Smith, Inc..... 250
E. BLACKSTONE, MASS.—East Blackstone Knitting Mill..... 50
LITTLE ROCK, ARK.—Bulman Furniture Store damaged..... 45
ALLIANCE, NEBR.—Business block owned by W. D. Rumer.... 30
SPOKANE, WASH.—McGoldrick lumber yard, adj. property..... 80
THE GLEN, N. Y.—Sawmill of McPhillips Bros..... 30
BRISTOL, VA.—King-Cochrane Bldg., adj. buildings..... 200
LEXINGTON, MISS.—City Feed & Produce Co., adj. bldg..... 80
NEVADA CITY, CALIF.—Refinery of California Pine Products Co. 40
EAST WACO, TEX.—Millroom of Central Farm Products Co..... 25
GREENVILLE, PA.—Murphy Co. store, adj. bldg..... 45
QUINCY, ILL.—May's drug store destroyed..... 80
PARK CRANE, N. Y.—Farm bldgs. of J. L. Ottoway, 2 mi. N. 25

American LaFrance Utica Branch Moved

The Utica office and plant of the American LaFrance and Foamite Corporation, has been moved to the company's main plant and general offices at Elmira, New York.

The change in location, which will probably not be entirely effected until some time late this fall, began about August 1, when the advertising, engineering and the sales departments were moved from Utica to Elmira.

Prior to the centralization of the two plants and offices, the Utica branch had manufactured all the industrial fire extinguishing devices marketed by the concern, with the Elmira plant being devoted to the manufacture of motor fire apparatus, ladders and equipment for municipal fire departments.

Mahwah, N. J., to Have Fire House—A new fire house will soon be erected in Mahwah, N. J.

Lansing, Mich., Wants Pensions Increased—A request has been made that the amount paid in pensions be increased.

Rock Island, Ill., Postpones Purchase—Rock Island, Ill., has postponed the purchase of a pumper because of insufficient funds.

Village Fails to Meet Installments—When Lyons, Ill., failed to meet its installment due on the purchase of fire apparatus, a representive of the company drove off with the machine. There was $9,000 due on the apparatus. The village is now virtually without fire protection.

South Dakota to Have Firemen's School—According to the president of the University of South Dakota, a firemen's school will be held at the university some time next year. Members of the state committee will cooperate with the South Dakota Firemen's Association. Some of the lectures will be given by university professors.

Ex-Chief E. Meginnity Dead

Edward H. Meginnity, seventy years old, and for two years chief of the Detroit Fire Department, died in a local hospital from an acute heart attack that developed while watching a baseball game.

He was an enthusiastic baseball fan, and during his term as chief he could be found on his off-days at the local field cheering for the home team. He rarely missed a game when the "Tigers" played at home.

Chief Meginnity entered the department May 1, 1882, and in January, 1883, was promoted to pipeman of a chemical company. He was advanced to lieutenant in March, 1886. The commissioners then promoted him to captain, and after serving a down town company for several years, he was made batallion chief, November 16, 1910. In September, 1919, he was made assistant chief and when Chief Timothy E. Callahan retired August 1, 1925, Chief Meginnity was made head of the department. But he retired from the fire department two years later.

The Late Edward Meginnity

He is survived by a daughter and a son, three sisters and two brothers.

"Butts" from Plane May Start Forest Fire

A burning cigarette or cigar dropped from an airplane is capable of starting a forest fire, according to the Forest Service of the United States Department of Agriculture. Forest officers recently made some tests which prove the assertion.

Reports of forest fires ascribed to cigarettes thrown from passing airplanes during the past year have been based largely on circumstantial evidence. A wide difference of opinion has prevailed as to whether a butt dropped from a swiftly moving plane would continue to burn until it reached the ground. Many believed the propeller blast might snuff out the fire.

To procure some dependable information, experiments with a forest patrol plane were conducted at the Spokane airport. Lighted cigars and plain-tipped cigarettes of brands commonly in use were dropped from altitudes of approximately 500 feet and 1,000 feet above ground. At the time of the tests, the temperature was about 75 degree F., relative humidity 34 per cent, and wind movement about 7 miles per hour.

Of six cigarettes recovered, four were still burning when picked up from the field. All five cigars recovered were still burning. It did not appear that increasing the height of fall from 500 to 1,000 feet was an important factor.

These tests demonstrated convincingly, says the Forest Service, that a large percentage of "smokes" dropped from altitudes up to at least 1,000 feet may still be burning after they have reached the ground, and thus under the right conditions may cause forest or grass fires. It appears that, with the growth of commercial aviation, it may become desirable to adopt measures to prevent the throwing of lighted butts from airplanes, and to provide convenient receptacles for butts in the cabins of planes.

South Bend, Ind., May Have New Station—An ordinance has been introduced in South Bend, Ind., for the construction of a new fire station in the northwest section of the city to cost $45,000.

Flywheel Hurled From Speeding Apparatus—Nine persons were injured in Seattle, Wash., when the flywheel flew off fire apparatus speeding to a blaze. The wheel was hurled through two windows of a department store. Only presence of mind on the part of the driver prevented the apparatus from plowing through the crowds.

CONNECTICUT FIREMEN HOLD SUCCESSFUL CONVENTION

Chiefs' Club Convened Same Time—Firemen's Treasury Has Balance of $20,707—Executive Committee to Select Next Convention City

By THOMAS F. MAGNER

WILLIAM J. CROCKETT, a member of the volunteer fire department at South Manchester, Connecticut, was elected president of the Connecticut State Firemen's Association at the forty-sixth annual convention of this organization, held August 16-17, at East Hartford. Michael J. Whalen of Hamden was unanimously elected vice-president. Other officers voted into office were as follows: Secretary, David W. Harford of South Norwalk; treasurer, Michael T. Souney of New Britain; chaplain, Rev. M. J. Ryan of South Meriden.

County vice-presidents elected were: Middlesex, George S. Pitt of Middletown; New Haven, Thomas F. Cavanaugh of Waterbury; Hartford, William H. Dailey of Hartford; Tolland, George B. Milne of Rockville; Windham, Frank Dumas of Putnam; New London, Calvin Edmonds of New London; Litchfield, John H. Griffin of Norfolk; Fairfield, George B. Talmadge of Norwalk.

The Connecticut Fire Chiefs' Club which meets annually with the state firemen re-elected Ex-Chief Rufus R. Fancher of the New Haven Fire Department, as president, and D. B. Mercer of West Haven as its secretary. Several new members were added to the club's roster. Lunch was served to the chiefs at the Oasis Club.

The report of Treasurer Souney of the state association showed that after the year's expenses were paid, the balance

Snapshots of the State Convention

1. Captain Edward Foley of Bridgeport talking to Bill Crockett, Manchester, newly elected president. 2. Deputy Chief Michael T. Souney, New Britain, treasurer. 3. Chief J. Frank Meunier, East Hartford, host to the visiting firemen, and John J. Sullivan, one of his aides.

in the treasury was $20,707.84. A total of 218 claims were paid during the year, which amounted to $18,193.90. The amount of $8,389.90 was paid out for the care of the orphan children of deceased firemen.

The business end of the convention which was attended by one of the largest representation of delegates yet recorded, brought out many important matters pertaining to the welfare of the firemen in the state. The convention heard the report of Secretary Harford in reference to the case of Lieut. O'Leary of the Waterbury Fire Department, who lost both lower limbs as the result of an accident while on duty. An effort was made to place Lieut. O'Leary's name on a permanent benefit list, but as this would be contrary to the association's by-laws, the matter was dropped and it was voted to continue benefits until the next convention.

After the business meeting on the next day was completed, the parade and field day, which is an annual feature in connection with the convention, was held. Resplendent in regalia which ranged from the ancient and traditional "red shirts" of the veteran companies to the staid blue of the prevailing type of uniform, more than two thousand men marched in the parade through the main streets of East Hartford. The turnout of the parade was exceptionally good. All types of fire-fighting equipment were represented from the modern aerial ladder to the diminutive hand engine of the old Hartford veterans, built in 1793. Many handsome prizes were awarded to the marchers.

The sports program lasted until early evening and was witnessed by a crowd of nearly one thousand persons. The 1930 convention will be held in a city or town to be selected by the Executive Committee.

Camp Fire Nearly Wipes Out Town

Necessity for improved fire protection facilities for towns surrounded by heavy brush and forest was clearly demonstrated in the fire which threatened to wipe out the suburban residential community of Mill Valley, less than twenty miles north of San Francisco on the southern slope of Mt. Tamalpais. For three days fire waged while an army of two thousand regular and volunteer fire fighters struggled to halt the march of the flames. While fanned and carried forward by a thirty-mile gale, the wind also proved to be the principal savior of the town and its millions of property valuation.

Although attempts had been made to give the community adequate fire protection it was found that much of the former efforts had been neglected and other necessary plans for improvement had been forgotten. Fire breaks had been made along the ridges and canyon sides but they proved of little value as the wind forced the flames over them into the homes of the wealthy and the near-wealthy. The fire jumped most of these breaks like a fleet hound over a hurdle as workers with picks and shovels struggled feverishly to clear more spaces to take their place.

Forty foot breaks are now being considered; suggested by a seasoned forester who watched the fight to save the community.

One feature proved to be interesting to observers. Two homes in the center of the fire when it was raging fiercely were saved because they were equipped with roof sprinkler systems. The roofs were of wooden shingle construction and the curtain of water which flowed continuously for many hours was the principal factor in saving them and their occupants from destruction. The town is now considering an ordinance which will prohibit the general use of wooden shingles hereafter and all re-built homes will have to have fire resistive roofs.

Fire departments from San Francisco, Ross, Kentfield, Sausalito and San Rafael rushed to the aid of the stricken community and the powerful pumpers from San Francisco worked continuously for many hours forcing water to the fire lines. With the exception of about two two-hour shutdowns two of San Francisco's pumpers—a Mack and an American La France—worked for nearly thirty-six hours. The shut-downs came when the machines were transferred from one point to another. Water was pumped from creeks and reservoirs and in the opinion of experienced fire-fighters proved to be an important factor. Other neighborhood equipment and five chemicals from San Francisco patrolled the business and residential districts outside of the fire section and prevented numerous blazes from flying brands. Hose lines as long as three-thousand feet were in service, dragged through the thick brush and forest by volunteers working under experienced "regulars."

While some criticism was heard that the Mill Valley hydrants were not standard, chiefs claim they had no particular difficulty in making connections because of the emergency coupling equipment carried on the apparatus.

Mill Valley also suffered from a recent re-organization of its fire department. Volunteers rushed in response to the call for aid but delay was occasioned through lack of specific training to meet such a situation. There is a question as to the extent of the damage had not San Francisco thrown several companies into the fray under the direction of trained battalion chiefs and captains who assumed control of the situation under the general supervision of the town authorities and army heads.

At present Mill Valley is attempting to build a formidable and effective fire organization with a plan to increase water mains, new building ordinances, inspection, training of firemen, and the adoption of various methods to take control of future fires which may get a start in the brush or forest which surrounds the town entirely.

The property damage in the recent fire was estimated at more than $1,500,000. There were about 130 summer and permanent residences destroyed and the flames came within two blocks of the center of the business district. Through some freak the flames swept down into a congested district and destroyed one house far below the fire line; the adjoining buildings being saved by prompt work of the men handling the pumpers in the lower end.

The fire menace has been hovering over Mill Valley for a number of years; it is a haven for hikers, nature-lovers and tourists and during the summer thousands wander through its scenic forests. It is believed that a party of hikers caused the fire which almost wiped the town off the map; destroyed homes valued from a few thousands to $300,000, and threatened the lives of many residents.

GUY C. MACDONALD.

STOCK IN BASEMENT SHOULD BE PROTECTED FROM WATER DAMAGE

Cooperation With Fire Department Makes It Possible to Cover Stock in Basements—Water Damage Constitutes Eighty Per Cent of Loss

By CHIEF JAMES T. O'DONNELL
Underwriters' Salvage Corps, St. Louis, Mo.*

CHIEFS, as well as property owners, have long bemoaned the fact that water damage often exceeds the direct damage done by fire. It is claimed that fully 80% of the loss resulting from fires is due to water damage—in other words the actual loss of property by burning in such fires is only 20% of what is generally referred to as fire loss. One's own record or experience will no doubt concur (or agree) with this statement.

In small fires the water damage may not be large, owing to the work of the patrols, but in fires that have reached proportions where it is necessary to pour thousands of gallons of water, water damage becomes a large item in the loss and it is here that the patrols show their usefulness and became quite a factor in reducing the water loss by their protective methods.

As to the salvaging of stocks in basements during a fire—the place of origin, extent of the fire, as well as the occupancy of building must first and immediately be considered. If it is at all possible to enter the basement, the sewer openings should first be opened and soil pipes at toilets opened so that some outlet for water may be provided. If it is not possible to work in the burning building, the risks adjoining should be given attention, as the water rapidly rising in basement of the burning building will find its way through the basement walls and flood adjoining basements. This is especially important should there be a street grade adjoining or adjacent to the burning building. Sewer outlets, etc., should be opened in these adjoining buildings, and, if possible, stocks on basement floor should be removed to upper floors. Syphons should be placed in working position as soon as possible to relieve the situation.

Experience at Fire

I have in mind a recent fire in a grocery house, occupying the first floor, balcony and basement of a four-story brick building. The fire seemed all over the first floor and balcony-stairs to the basement cut off by the fire. Slides, or basement openings, in the sidewalk were opened and prestolite lamps brought into the basement where a large stock of groceries were piled to within two feet of the ceiling. While sewer openings were being located by some of the men, others were protecting stock with covers, and, as lines were being shut down and only small lines used for wetting down, truckmen and patrolmen were busy getting the water out of the front and side doors of first floor.

Another opportunity occurred in the basement of a seven-story building which adjoined a building afire on all lower floors, and no opportunity for salvage work in the burning building. In this case a carload of harness leather in the basement of building adjoining was removed to upper floor. After the fire this basement contained about four feet of water.

Close and friendly cooperation with officers of the fire department has, under certain conditions, made it possible for us to make a salvage against water loss in basements. When an officer of the fire department, on request of Salvage Corps officer, is willing to "shut off" lines or change the point or place of attack, thus permitting us to have a little time to cover or move stock, it has resulted in our being able to show good results.

*Paper delivered at annual meeting of Salvage Corps Officers' Association of the United States.

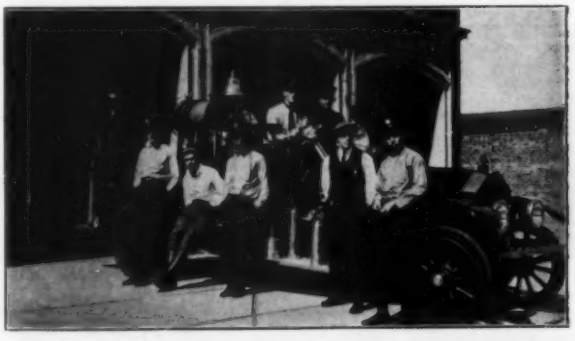
When That Strange Odor Did Not Mean a Cheap Cigar

Thousands of second-hand tires were destroyed when fire developed in an old tire yard at Chelsea, Mass. The odor was anything but pleasant, and the smoke was stifling.

Who Knew Gus L. Berger?

A. J. Neuw, American Vice Consul in Charge, Bahia, Brazil, is trying to find the relatives of an American who was killed in Bahia. Mr. Neuw writes:

"I am enclosing a post card found among the effects of the late Gus L. Berger, an American citizen who was killed in Bahia several weeks ago. It would be greatly appreciated if you would advise this consulate of the address of a relative of the deceased."



Post Card Found With Effects of the Late Gus L. Berger

The post card illustrated was found on the person of Mr. Berger, and may have been sent by fire department friends in this country. At any rate, the consul hopes that it may serve as a means of locating some one who knew the deceased.

Against Raises in Beaumont, Tex.

A member of the legislature has supported an opinion advanced by one of the city commission that a cut in salaries of city employees would be more in line than an appropriation for increases in pay. He stated that most city employees could not earn as much if they did not have political jobs.

Chief S. D. O'Connor had a letter published in the newspaper in defence of his department. He wrote that when he held his position by reason of political voting, then the city of Beaumont had no further use for him. Chief O'Connor stated that it was a rule that firemen were not to discuss politics on the streets or in the various fire stations.

Kelly in Charge of Springfield, Ill., Bureau—Captain T. J. Kelly has been placed in charge of the Fire Prevention Bureau, Springfield, Ill.

Queens to Get Five More Fire Houses—Plans are to be drawn for five more fire houses to be erected in Queens borough, New York City, just as soon as the six now in the course of construction are in operation. This announcement was made by Hubert Tracy, in charge of New York Fire Department Bureau of Repairs and Supplies.

Fire Fighting in National Forests

Fire hazards in the National Forests in California are extremely high, particularly in the brush covered foothills regions. Long, dry summers, steep, rough slopes covered with very inflammable chaparral, and the liability of periodic high winds, combine to make forest protection a difficult problem. The increasing numbers of persons who are using the national forests each year augment the chances of fires from carelessness and add to the difficulty of adequately safeguarding the brush and forest cover which is so valuable and so necessary for the protection of watersheds.

No Description Required

During the past nine years there were a total of 24,123 forest fires in California which caused a total damage of $11,370,870. Over 18,390 of these fires were man-caused. The Modjeska Canyon fire of 1926 is an outstanding example of the disastrous results of human carelessness. This fire, which started from a trash pile near a summer home, burned over 12,000 acres of valuable watershed in the Santa Ana Mountains, destroyed $25,000 worth of private property, killed many deer and other game animals, and cost the lives of two men. Over five-hundred fire fighters combatted this fire for ten days before it was controlled. The cost of extinguishing the conflagration exceeded $26,000. Damage caused by silt and debris from this burned watershed amounted to over $500,000 the first winter following the fire.

As a fire-prevention measure, all visitors to the National Forests are required to obtain a camp-fire permit before any form of outdoor fire, including fires in stoves, burning gasoline, kerosene, or wood, may be started on Government land. Free camp-fire permits may be obtained from all Forest Service Officers, as well as from automobile clubs and other authorized agents.

During seasons of unusual fire hazard, important watershed areas within the forests are posted and closed to all forms of public use and travel; smoking is prohibited, except in camps or at places of habitation. On certain recreation areas, fires are allowed only within the limits of improved camps. Each automobile and pack-train party camping in the National Forests must carry a shovel and axe suitable for fire-fighting purposes.

Because of the rapid spread of fires in the brush covered mountains, the big problem in controlling fires that do start in the National Forests is to get them while they are still small and easily extinguished. To aid in the rapid discovery of fires, lookouts are maintained on high peaks within and near the forests, and roads and trails are daily patrolled by forest guards. Frequent communication between these stationary and moving fire-detection forces is maintained by means of the telephone and the heliograph.

Visitors are welcome to all lookout stations and the officer acting as observer will be glad to show visitors around.

CHARLES W. GEIGER.

Little Rock to Spend $300,000

The issuance of $300,000 in bonds for the purchase of fire fighting apparatus and a fire alarm system was authorized August 19 by the voters of Little Rock at a special election at which nine other proposals were submitted.

The proposals were submitted by the city administration after many recommendations had been made by civic bodies, the Chamber of Commerce and individuals. Recommendations made for the past ten years by the Arkansas Fire Prevention Bureau and Chief Charles S. Hafer were grouped in one prosopal.

Recommendations of the Arkansas Fire Prevention Bureau, that probably will be acted upon since the adoption of the bond issue, include the purchase of five 750-gallon triple combination pumpers, two 55-foot city service ladder trucks, hose, minor equipment and a fire alarm system.

With the recommendations, the bureau urges the establishment of two new stations and abandonment of one present station that is equipped with a Ford truck. One station would be in a highly developed residential section in the western part of the city and would replace the present station in Fair Park, several blocks from any closely populated section. The other station would be in the manufacturing district in the eastern part of the city. If the two new engine companies and city service companies are established, the department would be composed of thirteen companies, including one aerial truck company.

It also is recommended that a drill tower with proper equipment be built at the Central Station. Minor equipment would include twenty-five salvage covers, one turret nozzle to be kept in reserve by one company, six combination hose shut-offs and door openers. A sufficient amount of new hose also is urged so that each company would have two thousand feet.

Proponents of the improvement of the department also urge the purchase of new aerial truck, to replace the present truck, which is the first piece of motorized apparatus in use by the department.

With the purchase of the new equipment and establishment of the new companies, forty-five additional men would bring the personnel of the department to 125. It is recommended that an additional assistant chief be named, making three in the department.

One of the greatest needs of the department is said to be a new fire alarm system, which the Fire Prevention Bureau recommends. It suggests that enough boxes be installed so that one shall be within five hundred feet of every building in high value districts and within eight hundred feet of every building in closely built sections. Boxes in the mercantile and manufacturing districts would be designated by red lights.

CARL OLSSON.

Fighting a Blaze in Timbered Land is a Task Requiring an Army of Men

Municipal Electricians Hold Convention

With some 300 delegates in attendance the 34th annual convention of the International Association of Municipal Electricians got underway at the Hotel Statler in Boston, Mass., on August 20. The convention was opened at 10 o'clock in the assembly room with invocation by the Rev. Henry Arthur Kernan.

Perry Bugbee, assistant managing director of the National Fire Protection Association of Boston, greeted the delegates on behalf of the National Fire Protection Association.

G. L. Fickett, superintendent of fire alarms, of Boston, read reports of committee on resolutions on death of members and friends, and also reports of arrangement committee on announcements. The report of executive committee preceded the adjournment of the morning sessions.

The afternoon session was given over to a series of addresses and lectures by men prominent in electrical functions of their cities. Every phase of electrically controlled police and fire alarm systems and other machinations which are used in operations of the various city departments was discussed. The delegates were very attentive while the speakers stressed the necessity of these most important adjuncts in the operations of city departments, especially fire and police departments.

Among the speakers were H. B. Kirkland, Society for Electrical Development, New York; Dr. M. G. Lloyd, Chief of Section of Safety Engineering, Bureau of Standards, Washington, D. C.; Victor H. Tousley, electrical field engineer, N.F.P.A., Chicago, Ill.; Carl Krieger, Assistant Chief Engineer, Underwriters Laboratories, Inc., New York City and C. W. Abbott, General Cable Corporation, New York City.

Grant Building, Pittsburgh, Where Standpipe Was Tested

In connection with an article "Skyscraper Standpipe Tested," in the August 21 issue, the illustration was a reproduction of a test conducted of the standpipe in the Industrial Trust Company Building, Providence, R. I., and not of the Grant Building, as mentioned. Above is an illustration of the Grant Building. The tests of the Industrial Trust Building at Providence were conducted some time previous to the other one, and in the presence of Chief Charlsworth, Deputy Chiefs Fisher and Bigney, and the Board of Fire Commissioners, Providence, R. I. Representatives of the New England Underwriters and various fire insurance companies were also present. Streams were obtained at the sixteenth floor, the twenty-third floor and the twenty-eighth floor which is 354 feet above street level. Pump suction was obtained from the low pressure system at seventy pounds. At one test with two pumpers in operation, four one-inch streams were discharged at the sixteenth floor, three one-inch streams at the twenty-third floor and two one-inch streams from the twenty-eighth floor. Each pump maintained a pressure of 250 pounds. In all a total of 1,719 gallons per minute were discharged.

Committee reports on fire and safety codes were read by C. S. Graham, Jacksonville, Fla.; on R. C. and W. P. wire by Louis Gascoigne, Detroit, Mich.; and on electrical protection and grounding by M. J. Donohue, Niagara Falls, N. Y. The report of the electrical committee of N.F.P.A. was read by William P. Briggs of New Bedford.

In the evening the delegates were treated to a moonlight sail, the boat leaving Rowes Wharf at 8.30.

On August 22, the day was devoted to the general subject of fire alarm and police signal systems. The program follows:

Morning Session, 9 A. M.

"The Importance of Secrecy in Police Work." E. E. Salisbury, Gamewell Co., Chicago, Ill.

"Radio as Applied to Fire Alarm and Police Signal Systems." James A. McCarron, Radio-electrician, Boston Fire Department.

"Installation of Fire Alarm and Police Signal Systems." Edward A. Brass, Supt. Fire Alarm and Police Signal Systems, Shreveport, La.

"Outside Construction of Fire Alarm and Police Signal Systems." H. I. Turner, Gamewell Co., Newton Upper Falls, Mass.

Committee on Red Lights as Applied to Fire Alarm and Police Signal and Traffic Systems. William P. Briggs, New Bedford, Mass.

Committee on Construction Materials and Methods of Installing Fire Alarm and Police Signal Systems. J. A. Norris, Tulsa, Okla.

Committee on Fire Alarm and Police Signal Apparatus. Leslie R. Haight, Binghamton, N. Y.

Afternoon Session, 2 P. M.

"Rezoning and Numbering Fire Alarm Boxes." A. C. Ames, Supt. Fire Alarm, Providence, R. I.

"Grounding of Signal Systems." C. E. Beach, Gamewell Co., Newton Upper Falls, Mass.

"Interior Fire Alarm Systems." B. B. Hatch, Holtzer Cabot Electric Co., Boston, Mass.

Committee Reports

Committee on Overhead and Underground Fire Alarm Circuits. Charles Reading, Salt Lake City, Utah.

The Exhibits

There were some interesting exhibits in connection with the convention. The display included fire alarm boxes, traffic signals, flashing lights, tape registers, and fire and police signal systems.

The exhibits were arranged to good advantage around the meeting hall on the mezzanine floor of the Hotel Statler.

Among the firms that were represented were the following: The Wiremold Conduit System, showing Wireflex and Wireduct for surface wiring; display of special rectifiers for charging police and fire alarm batteries, shown by Robert J. Gaskill, of Fort Wayne, Ind.; exhibit by the Hazard Insulated Wire Works, a division of the Okonite Company, of Wilkesbarre, Pa.; flood lights, landing field lights, and airplane field markers; conduit fittings shown by the Appleton Electric Co., of Chicago, Ill.; the "Big Brute" splicers' furnace shown by the P. Wall Manufacturers' Supply Co.; traffic signal controller shown by the Harrington-Seaberg Co., of Moline, Ill.; display by the Holtzer Cabot Co. and the Eagle Sales Co., a subsidiary of the Gamewell Company, of Newton Lower Falls, Mass., the Gamewell firm showing the Peerless transmitter, registers, boxes, and switches, also the Codewell siren. Safety portable electric lights were shown by the Daniel Woodhead Co., of Chicago, Ill.; and traffic lights were displayed by the Essco Mfg. Co., of Peoria, Ill.

Other exhibitors were the National Electric Products Corporation, of Pittsburgh, Pa., showing armored bushed cables; the Copperweld Steel Co., of Glassport, Pa.; the Union Metal Mfg. Co., of Canton, O.; the Federal Electric Co., of Chicago, showing police and fire alarm systems; the Canton Battery and Ignition Co., of Canton, Mass., showing safety flashing signals; L. S. Branch Mfg. Co., Newark, N. J.; Steel and Tubes, Inc., a subsidiary of the Republic Iron and Steel Co., of Cleveland, O.; the Rawplug Co., of New York; Cooper Dri-power batteries; Rome Wire Company, division of the General Cable Corporation, Rome, N. Y.; Wadsworth Electrical Mfg. Co. Inc., of Covington, Ky.; and the Tobe Deutschanin Corp., of Canton, O. The Westinghouse firm showed the W K-50 Westinghouse meter service breaker. The Philadelphia Storage Battery Co. also exhibited.

HARRY BELKNAP.

Marshall, Minn., to Buy Pumper—Bids have been invited by Marshall, Minn., for supplying a 750-gallon pumper.

Berne, Ind., May Receive New Apparatus—Berne, Ind., may receive a 750-gallon pumper. The present pumper is eleven years old and badly worn.

Ship Fires

(*Continued from page 764*)

upon becoming heated, assume a different hue than plates which are at normal temperature. In this way the location of the fire can sometimes be determined.

When sinking a vessel which is afire, pick out a site where the river bottom is of silt rather than of rock. A large ship settling on a rocky bottom may so damage the hull and machinery as to make the vessel worthless from the standpoint of salvage. When a ship is let down on a soft bottom none of such damage may be anticipated, and the ship may be raised again after the fire has been extinguished and properly salvaged.

Chief Wilkins on Trip Around World

J. T. Wilkins, head of the fire department at Melbourne, Australia, was a visitor in New York City where he studied the local fire department system. Acting Chief Thos. F. Dougherty of the New York Fire Department was host to the foreign chief.

Chief J. T. Wilkins

Chief Wilkins was born near Avoca, Australia, and at the age of fifteen was an apprentice in the General Engineering Works, Melbourne. He became a member of the Metropolitan Fire Brigade on April 15, 1891, and after serving in all the ranks was made chief officer, December 22, 1927.

The practical experience gained at his trade enabled him to establish fire department shops. They have been so developed that all work required by the department is done there. Chief Wilkins was elected president of the Victorian Institute of Engineers. He is also Justice of the Peace for Victoria.

He arrived in New York by way of the Suez Canal. On his return trip he will travel by way of the Pacific Ocean, so by the time he returns to his home in Melbourne, he will have completed a trip around the world.

Ways to Eliminate Smoke House Hazard

There have been so many smoke house fires in the Middle West while smoking meats, that an alternative process for treating the meat has been developed to avoid some of the blazes.

While smokehouses are of fireproof construction, the grease falling on wooden floors constitute the real hazard. A white kiln-dried salt, smoked with hickory wood smoke is now being marketed so that the flavor may be obtained without resorting to the smokehouse.

Plymouth, O., to Erect Fire House—A frame fire house will be erected in Plymouth, Ohio.

Knoblock Heads Indiana Firemen—Roy Knoblock, South Mazoo, Mich., has been selected as the 1930 convention city by the Michigan State Fire Chiefs Association. The officers elected are A. M. Jaeger, Ecorse, president; Thomas Maxwell, Cadillac, vice-president; George F. Dansbury, Groose Pointe Farms, secretary, and F. W. Peabody, Albion, treasurer.

Knoblock Heads Indiana Firemen—Roy Knoblock, South Bend, was elected president of the Indiana Fire Chiefs Association. The other officers are Harry Voshell, Indianapolis, first vice-president; George Rosenberger, Alexandria, second vice-president; Archie Cabe, Munice, secretary; John Stahlhut, Ft. Wayne, treasurer. About seventy-five chiefs were present at the convention held in Michigan City.

Illinois Firemen to Meet in Joliet

An interesting and instructive program has been arranged for the forty-second annual convention of the Illinois Firemen's Association that will meet in Joliet September 10-12. The Chamber of Commerce building will be used for the convention hall while the Louis Joliet is the hotel headquarters.

The program follows:

Tuesday, September 10—Morning

Convention will be called to order by President Albert Hasse, Peru, Ill., at 10:00 a. m.
Invocation—Rev. James F. Farrell, Chaplain, Joliet Fire Department.
Address of Welcome—Mayor Geo. S. Sehring, Joliet.
Response—President Albert Hasse.
Response by Delegates.
"How to Maintain and Run a Volunteer Fire Department"—Chief E. W. B. Sparks, Bushnell.

Afternoon

"Training the New Firemen"—Chief Geo. B. Ward, Department of Public Safety, Division of Fire Prevention, St. Louis, Mo.
"Our Obligation to the Exhibitor"—Chief Albert Herring, Murphysboro.
"Fire Department Operations"—Mr. Clarence Goldsmith, Ass't. Chief Engineer, National Board of Fire Underwriters, Chicago.
Address—Hon. John G. Gamber, Chicago.

Tuesday Evening

Memorial Services 7:30 p. m., St. John's Universalist Church, Rev. W. H. McPherson, Pastor:
Invocation—Rev. W. H. McPherson.
Address—Mr. Albert Hasse, President.
Roll Call of Deceased Members—Mr. Roy W. Alsip, Secretary.
Address—James F. Burke, Assistant United States Attorney, Will County.

Wednesday, September 11—Morning

Business session and reports of committees.
"Value of Organization in the Fire Service"—Chief John M. Evans, President International Association of Fire Chiefs, New Orleans.
Address—Mr. Frank H. Jones, of the Illinois Inspection Bureau, Chicago.
"Our Two Percent Foreign Insurance Tax"—Chief John Hawk, Moline.
By special permission at 11:30 a. m.—Trip through the new prison at Statesville.

Afternoon

"The New Illinois Arson Law and Our Arson Squad"—Hon. S. L. Legried, State Fire Marshal, Springfield.
"Pension Laws"—Senator Martin Carlson, Moline.
Address—Mr. Percy Bugbee, Assistant Managing Director, Nation Fire Protection Association, New York City.

Thursday, September 12—Morning

"Pumpers in Fire Fighting Service"—Mr. J. E. Allen, Engineer, Boyer Fire Apparatus Co., Logansport, Ind.
Address—Hon. John Byers, Dixon, Ill.
Election of officers.
Selection of next convention city.

Philbrick in Charge of Pacific Sales

Announcement has been made of the appointment of F. B. Philbrick as district sales manager for the Pacific Coast territory to handle sales for the Gamewell Company. This fire alarm manufacturing company has sales offices at principal points throughout the country to care for their business. Headquarters are located at Newton Upper Falls, Mass.

F. B. Philbrick

Ready for Fire Prevention

The National Fire Protection Association has distributed lists of printed material that they have available to assist municipalities in the observance of Fire Prevention Week—posters, stickers, folders, and so forth.

Fire chiefs and city officials, planning now to place emphasis upon the reduction of fire losses and the need for fire prevention measures, are urged to communicate with the N. F. P. A., 60 Batterymarch street, Boston. Included in the literature is sufficient information to enable chiefs to prepare speeches to be delivered at civic organization meetings, and before the school children.

FIRE DEPARTMENT ACTIVITIES

Enola, Pa., Has New Fire Station—A $30,000 fire station has been placed in service in Enola, Pa.

Rural Sections to Have Protection—Outlying districts near Eureka, Cal., is to have fire protection from Eureka.

Fire Department Started in Toledo, Wash.—A volunteer fire department has been organized in Toledo, Wash.

Dravorsburg, Pa., to Buy Apparatus—Dravorsburg, Pa., is to purchase fire apparatus.

Company Organized in Plumsteadville, Pa.—A fire company has been organized in Plumsteadville, Pa.

Pumper Delivered to Winona, Minn.—A Pirsch 1,000-gallon pumper equipped with a booster tank has been delivered to Winona, Minn.

Fort Wayne Firemen at Chicago School—Two captains of the Ft. Wayne, Ind., fire department have been sent for a three weeks course to the Chicago drill school.

S. Pittsburgh, Tenn., to Buy Apparatus—South Pittsburgh, Tenn., plans a $10,000 bond issue for the purchase of fire apparatus.

New Station Urged for Springfield, Mass.—A suggestion has been made that a new fire station be erected in Springfield, Mass.

Fall River, Mass., to Have New Headquarters—The city council of Fall River, Mass., is seeking a location on which to erect a new fire house for Fall River, Mass.

Spencer, W. Va., Presented With Siren—The American Legion has presented Spencer, W. Va., with an electrically operated siren.

Reseda, Cal., to Erect Fire House—Plans will be drawn for a fire house to be erected in Reseda, Cal. It will cost $25,000.

Old Sioux City Station Being Raised—The old No. 3 fire station in Sioux City, Ia., is being torn down to make room for a new station that will be erected.

Osgood, Ohio, Raising Funds—Funds are being solicited for the purchase of fire apparatus to protect rural property about Osgood, Ohio.

Pittsburg, Cal., May Improve Fire Alarm—Improvements to the fire alarm system to cost $14,000 are being considered by Pittsburg, Cal.

San Anselmo, Cal., to Buy Fire Apparatus—San Anselmo, Cal., is to shortly vote $30,000 bonds for the purchase of a pumper and fire equipment.

Oroville, Cal., May Improve Fire Alarm—Plans were approved for a new fire alarm system for Oroville, Cal., to cost $20,680.

Norristown, Pa., Plans to Buy Apparatus—A plan has been proposed whereby five new pieces of fire apparatus will be purchased within the next five years.

Monticello, Ark., Plans to Buy Apparatus—An ordinance has been passed by Monticello, Ark., for the purchase of fire apparatus.

Tests Made of Tacoma Fireboat—Tacoma, Wash., Fireboat No. 1 is now about ninety-five per cent complete, and trial runs have been made.

Kalama, Wash., to Buy Pumper—Kalama, Wash., voted to buy a 500-gallon Pirsch pumper. Delivery is expected early in September.

Youngstown, O., Asks for More Firemen—Chief Callan of Youngstown, Ohio, in his annual report, has asked for seventy new firemen.

Akron, O., to Reform Pension Board—Plans are being made to reorganize the pension board serving the fire department of Akron, Ohio.

Baltimore Firemen Seek Increase—Efforts are being made to include in the next budget of Baltimore, Md., a fund for firemen's pay increases.

Martinez, Cal., to Erect Fire House—A contract has been awarded for the construction of a fire house in Martinez, Cal.

Glendale, Pa., Selected for Convention—The next convention of the Western Pennsylvania Firemen's Association will be held in Glendale, Pa. William H. Sharah of Bradock is secretary.

Flintridge, Cal., Has New Fire Station—A new fire house, equipped with all kinds of conveniences for the men, has been placed in service in Flintridge, Cal. The building is electrically heated throughout.

Pawling, N. Y., Firemen Threaten Walkout—Because of a village edict that fire apparatus of Pawling, N. Y., is not to leave the corporate boundaries, the firemen are contemplating a general walkout.

Hollywood, Cal., to Have New Fire House—Construction will be started soon of a new fire house for Hollywood, Cal. The building will be two stories high and will cost $75,000.

Red Lights Warn Motorists—A new arrangement has been started for all fire stations in Harrisburg, Pa., so that in case a fire alarm is received at night, red lights are turned on near the fire house to warn motorists.

Better Hours Sought for Mobile Firemen—An effort is still being made to obtain the two-platoon system for Mobile, Ala. An attempt will also be made to increase the wage scale.

E. Liverpool, O., Rejects Fire House Bids—The Board of Control, East Liverpool, Ohio, has rejected all bids for the construction of a new fire house as they exceeded the $60,000 available.

New York Firemen Meet in Schenectady—Four hundred firemen attended the tenth annual convention of the New York State Permanent Firemen's Association, Schenectady. A trip was made to Saratoga Springs, and a clambake was provided for the guests.

Helena, Mont., Urged to Erect Fire Station—Following a disastrous fire in Helena, Mont., a number of residents circulated a petition for a $125,000 bond issue to build a new combined fire station and city hall, and to purchase additional fire fighting equipment.

Myers, Former Spokane Chief, Dead—A. Harry Myers, seventy-four years old, and formerly chief of the fire department of Spokane, Wash., died recently. He was chief of the regular department from 1896 to 1912, and helped to fight the great fire of 1889.

Court Upholds Right to Refuse Permit—The Los Angeles Board of Fire Commissioners has been upheld in Court in the matter of refusing to issue permits where they deem a fire hazard exists. Action was brought against the commissioners by two men who believed that the Board should have granted them a building permit.

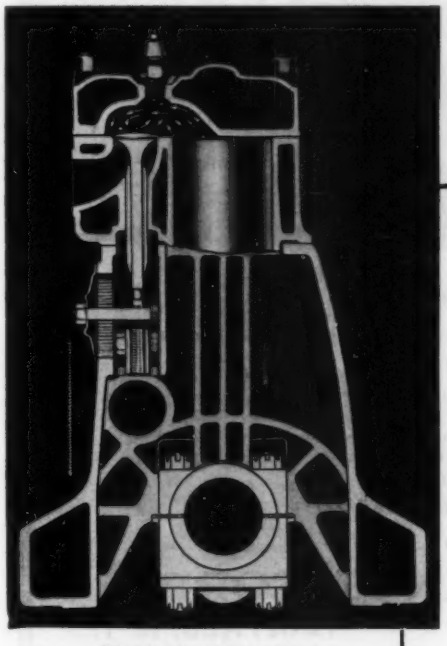
Austin, Tex., Has Two New Fire Houses—Two new fire houses, one in the Hyde Park section and the other on East Avenue, have been placed in service in Austin, Tex. These are the first buildings to be completed under the $250,000 bond issue voted in May, 1928. Each of the stations houses a pumper.

Auburn, N. Y., Wants Pay for Prison Damage—A committee has been appointed by Auburn, N. Y., officials to confer with state officers relative to reimbursement for the $12,000 damage to the city fire apparatus at the time of the prison uprising when four convicts escaped. Several of the firemen were injured and Capt. Patrick Morissey received two bullet wounds.

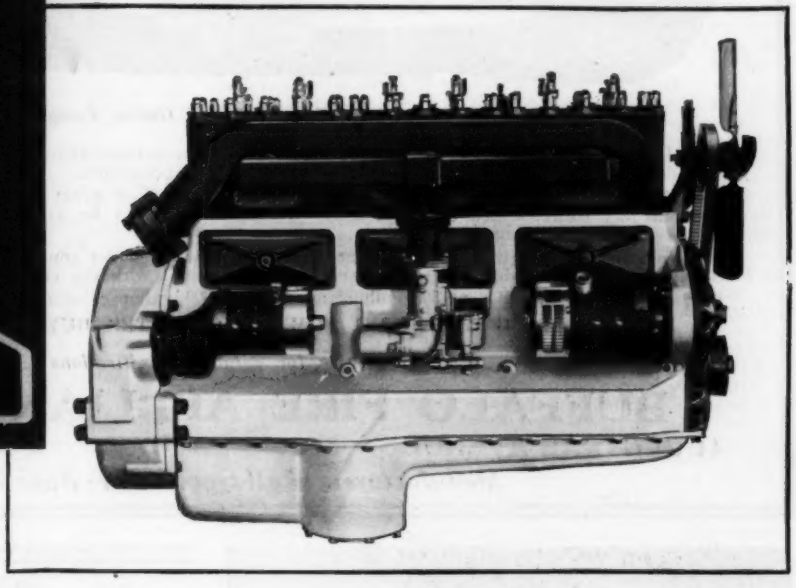
Wheeling, W. Va., Asks for Two-Platoon—A petition has been presented in Wheeling, W. Va., for the installation of a two-platoon system. In the petition it was stated that Clarksburg, Huntington, Fairmont and Morgantown all operated under this plan. In the petition were included letters from chiefs where the plan was used, recommending the two-platoon system. At present the men must serve two and one-half days before they are given one day off.

Lyndhurst Firemen Close Fire House—After discharging eleven firemen in Lyndhurst, N. Y., the mayor learned that the firemen own the fire house and the city fire apparatus is without protection. The mayor appointed three new drivers, and the men so appointed were not favorable to the regular firemen. As a result, eleven firemen were ousted, but so was the village's fire apparatus. The firemen own the fire house and are now thinking of converting it to some private use.

Reserve POWER for any emergency



Waukesha Heavy-Duty
Six-Cylinder Construction



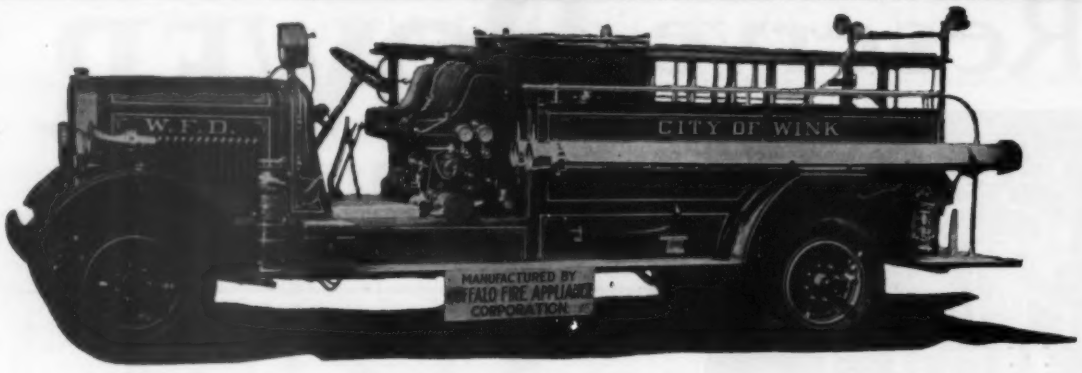
THE power an engine can develop is purposely limited sometimes, to reduce the stress in the frame. Such engines lack the reserve power needed in emergencies. No compromise in this direction is found in Waukesha Engines.

Waukesha's "Girder" type crankcase is designed for extra rigidity, both in bending and in torsion. The crankshaft is oversize—3½ inches in diameter. The steel backed bearing caps are held by four heat-treated alloy steel stud bolts. Reciprocating parts are closely paired and accurately balanced. Not only is objectional vibration thus eliminated, but the combining of girder crankcase, rigid bearing and crankshaft construction is an exclusive Waukesha feature that makes double flywheels or dampeners unnecessary.

Bulletin No. 718 describes this engine in full detail. Write *Fire Equipment Division, Waukesha Motor Company, Waukesha, Wisconsin. Offices: 8 West 40th St., New York—7 Front St., San Francisco.*

957

WAUKESHA ENGINES



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Buffalo Pumpers are the most highly developed in design, construction and engineering standards and are intended for municipality, community and township fire protection.

Buffalo Pumpers are also noted for their efficiency and their great abundance of reserve power. They are pumpers with stamina and speed. All the above have to be credited for bringing great pumping merits for Buffalo Pumpers.

Buffalo Pumpers are given great and careful attention when under construction at our factory by engineers, both mechanical and designing, who have been in contact with the construction of pumpers for years.

Buffalo Pumpers range from 300 gallon capacity to 1000 gallon capacity.

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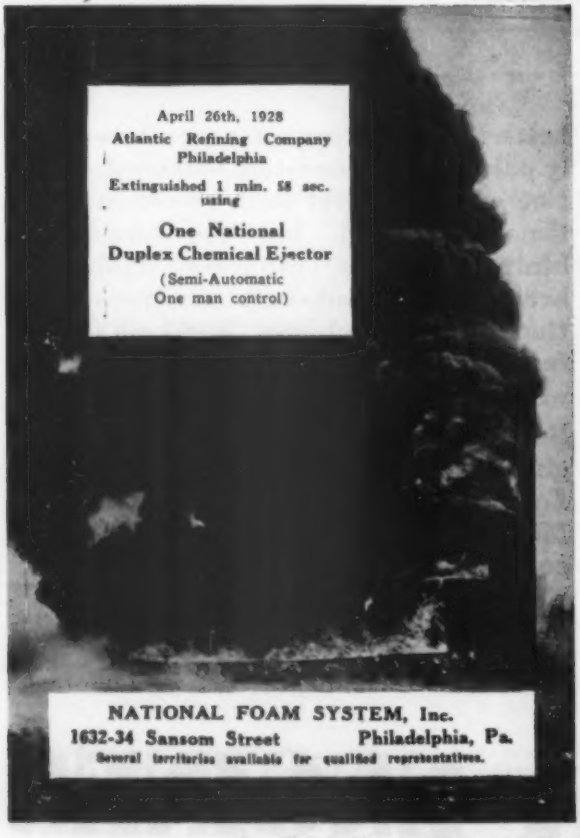

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PROPOSED IMPROVEMENTS

Haledon (mail Paterson), Passaic Co., N. J.—At meeting held recently by Fire Company No. 1 it was decided that uniforms must be procured by all active members before Jan. 1.

West Wyomissing (mail Wyomissing), Berks Co., Pa.—Committee appointed by West Wyomissing Civic League for purpose of organizing a fire department. Paul Orth, Chairman.

Anderson, Anderson Co., S. C.—An election is to be held in the near future to vote on fire alarm system bonds to the amount of $30,000 and fire station bonds to the amount of $10,000.

Pampa, Gray Co., Tex.—At election held August 20th city voted in favor of a $33,000 bond issue for erection of new fire station and purchase of equipment.

San Diego, Cal.—Reports state City Council authorized the purchase of new pumper, touring car, and two light automobiles for the fire department at estimated cost of $16,500.

Washington, D. C.—Reports state Fire Chief Geo. S. Watson has advocated the purchase of an ambulance as an auxiliary unit for the District Fire Department.

Donaldsonville, Ascension Co., La.—City to purchase new equipment for fire department.

Elko, Elko Co., Nev.—Chamber of Commerce will take up matter of purchasing new piece of fire apparatus with the City Council.

Massillon, Stark Co., Ohio.—Installation of twenty new fire alarm boxes was recommended by Fire Chief Edward J. Hunsinger.

Lewistown, Mifflin Co., Pa.—Henderson Fire Co. to purchase new piece of fire apparatus. Geo. K. McClintic and Walter Wolfkil on purchase committee.

West Hampton Beach, Suffolk Co., N. Y.—A meeting is to be held shortly to vote on appropriation of $14,218 for maintenance and new equipment for fire department.

Pasadena, Harris Co., Tex.—At election held August 19th city voted in favor of a $50,000 bond issue for erection of new fire station. G. W. Conrad, Mayor.

Coopersburg, Lehigh Co., Pa.—Plans are being drawn for proposed new municipal building and fire station.

San Antonio, Bexar Co., Tex.—Reports state city planning erection of two additional fire stations. Estimated cost $25,000 each.

McMinnville, Yarnhill Co., Ore.—A special election will be held shortly to vote on a bond issue for purchase of new piece of fire apparatus, according to reports. Ivan Pearson, Chief of Fire Department.

La Habra, Orange Co., Cal.—City Council considering calling an election to vote on a bond issue for purchase of new fire apparatus.

CONVENTION DATES

Sept. 3-5—KENTUCKY FIREMEN'S ASSOCIATION. 10th Annual convention and 2d Short Course for Firemen, Ashland, Ky. Secretary, Captain S. G. Render, 303 Speed Bldg., Louisville, Ky.

Sept. 9-11—ARKANSAS STATE FIREMEN'S ASSOCIATION. 8th Annual Convention, Camden, Ark. Secretary-Treasurer, H. D. Compton, Central Fire Station, Little Rock, Ark.

Sept. 10-12—ILLINOIS FIREMEN'S ASSOCIATION. 42nd Annual Convention, Joliet, Ill. Secretary, Assistant Chief Roy W. Alsip, Fire Department, Champaign, Ill.

Sept. 17-18—IOWA STATE FIREMEN'S ASSOCIATION. 52nd Annual Convention, Red Oak, Ia. Secretary, E. E. Parsons, Marion, Ia.

Sept. 18-19—MISSOURI ASSOCIATION OF FIRE FIGHTERS (Consolidated with former Missouri State Association of Fire Chiefs). Annual Convention, Jefferson City, Mo. Secretary, M. J. Mulvoy, 3500 S. Grand Boulevard, St. Louis, Mo.

Sept. 19-22—LOUSIANA STATE FIREMEN'S ASSOCIATION. 24th Annual Convention, Jennings, La. Secretary, Chief A. J. Bethancourt, Houma, La.

Sept. 20-21—NEW JERSEY STATE FIREMEN'S ASSOCIATION. 52nd Annual Convention, Atlantic City, N. J. (Tentative date, to be definitely set later by Executive Committee). Secretary, William Exall, Room 602, Chamber of Commerce Bldg., Newark, N. J.

Oct. 1-3—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. 50th Annual Convention, Hotel Roosevelt, Pittsburgh, Pa. Secretary, Charles E. Clark, P. O. Box 217, Wayne, Pa.

Oct. 15-17—RAILWAY FIRE PROTECTION ASSOCIATION. Annual Meeting, Toronto, Can., Secretary-Treasurer, R. R. Hackett, Baltimore & Ohio Railroad, Baltimore, Md.

Oct. 21—SOUTHEASTERN FIRE CHIEFS ASSOCIATION. 2nd Annual Convention, Tutweiler Hotel, Birmingham, Ala. Secretary, Chief H. E. Whitner, Hickory, N. C.

Oct. 22-25—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 57th Annual Convention, Hotel Tutweiler, Birmingham, Ala. Exhibits City Auditorium. Recording Secretary, Chief James J. Mulcahey, Yonkers, N. Y.; Executive Secretary, Jay W. Stevens, 113 Merchants Exchange Bldg., San Francisco, Cal.; Chairman, Exhibit Committee, Chief Selden R. Allen, Brookline, Mass.

May 12, week of, 1930—NATIONAL FIRE PROTECTION ASSOCIATION. 34th Annual Meeting, Atlantic City, N. J. 1931 Convention probably to be held in Toronto, Can. Secretary Managing Director, Franklin H. Wentworth, 60 Batterymarch St., Boston, Mass.

May 14, 1930—DEL-MAR-VA. VOLUNTEER FIREMEN'S ASSOCIATION. 1st annuual convention, Cambridge, Md. Secretary, J. Emory Parks, Cambridge, Md.

June, 1930—EASTERN ASSOCIATION OF FIRE CHIEFS. 3rd Annual Convention, Baltimore, Md. (Exact date to be decided later.) Secretary, Ex-Chief T. Howell Johnson, Room 602, Chamber of Commerce Bldg., Newark, N. J.

Lake George, N. Y., to Vote on Fire District—Lake George, N. Y., will vote on new fire zones. A proposition has been presented to raise $18,000—$15,000 for the purchase of apparatus and $3,000 for upkeep.

Fire Apparatus Delivered to Bangor, Me.—A ladder truck made by D. McCanns Sons, Portland, has been delivered to Bangor, Me.

How a Powder Plant Looks to Layman

A layman's impressions of his trip through a dynamite manufacturing plant are contained in the following narrative by Fire Commissioner John J. Dorman of New York, following his return from Wilmington, Del., a week ago where he attended a luncheon given by the Wilmington Chamber of Commerce to Honorary Deputy Chief William H. Todd of New York, in conjunction with the Delaware State Volunteer Firemen's Association.

Commissioner Dorman was accompanied by Aldermanic President Joseph V. McKee of New York. Being Fire Commissioner, Mr. Dorman expressed a desire to see the Du Pont plant across the river at Gibbstown, N. J. Mr. Dorman said:

"I was taken across the Delaware River on a yacht. When I reached the plant it was necessary for me to leave matches and my cigarette lighter with the boat captain. I was then taken to the explosives area in an automobile and there my shoes were inspected. Since I was wearing rubber heels I was not required to put on the heavy rubbers which some of the party had to wear in order to enter these buildings safely.

"I visited a number of buildings where nitroglycerin, the chief explosive ingredient of dynamite, and where dynamite itself is manufactured. I was particularly impressed with the close supervision given to the various operations and the care exercised in handling the several ingredients and the finished product. On questioning a number of workmen, I found that the majority have been engaged in this same work for a number of years. Their long experience showed itself in their methods of handling these highly explosive materials.

"After seeing the manufacture of nitroglycerin, I visited the house in which this liquid nitroglycerin is mixed with the various dope ingredients which go to make up the finished product. The nitroglycerin is brought to this mixing house in a rubber tired buggy and allowed to flow into the mixer through a rubber hose. The mixed powder is removed from the mixer with wooden shovels and transported in wooden carriers by a tram truck to a packing house. Here it is automatically packed into paper shells. I was particularly impressed with the type of machine used. It first gave me the impression that the dynamite was being handled roughly, whereas on close inspection I found that all parts of the machine were protected in such a way that there was no danger from friction or rough handling. The cartridges are then taken by tram truck to another building where they are paraffined on the outside to protect them further, especially from moisture, and are packed in paper-lined wooden boxes with sawdust. The lid covers for the boxes are nailed in place by a machine equipped with brass parts for the prevention of sparks. The buildings of this line I found were spaced about 400 ft. apart and protected one from the other by heavy barricades. In fact, I found that steps had been taken throughout the entire plant for the protection of life and the prevention of fire.

"From the box packing house I saw the boxed explosives placed in broad gauge cars in the manner specified by the U. S. Bureau for the Safe Transportation of Explosives and the Interstate Commerce Commission. My observation of the care exercised by loading these cars satisfied me that the methods employed are absolutely safe.

"I was then taken to the research laboratories where several demonstrations were made showing me what should and should not be done in the handling of high explosives. There was one demonstration which stands out in my mind. One of the Laboratory employes took three sticks of dynamite, known as duPont Special Gelatin, and hurled one after another up against a steel wall about 30 feet away. Two of the cartridges were broken open but none exploded. He then brought the sticks back to me for my examination. Then to show that the dynamite was unharmed and that it possessed its original usefulness, he exploded one of these cartridges by the use of a detonating cap and fuse. Another stick he lighted with a match and this burned about as fast as an ordinary piece of wood. Of course they do not recommend that dynamite be thrown about carelessly or that people jeopardize their lives by burning dynamite. On the other hand, I was impressed by the rough handling that the dynamite would stand."

WM. JEROME DALY.

Cosmopolis, Wash., Considers Fire Boat—Following a fire in Cosmopolis, Wash., the residents are contemplating the acquisition of a fire boat for protection of large property values in the harbor.

Yorba Linda, Cal., to Form Fire District—A fire district made up of two zones, is to be formed in Yorba Linda, Cal.

Louisa, Ky., Purchases Siren—A siren operated by a five h.p. motor is to be installed in Louisa, Ky.

The Round Table

(*Continued from page 766*)

M. P. Leonard, Chief, Erie, Pa.: Hydrants in charge of the water department are painted red. We have eight- and twelve-inch mains in the manufacturing and business district and six-inch mains in the residential sections. The pressure on the mains is from forty-five to ninety pounds. If additional pressure is required this is secured by connecting to a booster pump.

The fire department is notified of any hydrants which are in need of repairs and also when they are put into service again.

D. G. Schultz, Chief, Bennington, Vt.: Our hydrants are painted a deep red. On streets where there is concrete paving a square is painted red around them. We do not mark the hydrants for the size of the main because the mains are practically all the same size with the exception of the outskirts of the village where they are smaller.

There is not much choice as to which hydrant to use at a fire. Our practice is to hook up to the one nearest the blaze. If possible we do not connect to hydrants on the same main.

J. C. Moran, Chief, Hartford, Conn.: Hydrants are painted red. However, we have not found it necessary to mark hydrants in this city to determine the size of mains as they are of adequate dimension through the city. In the center of the city or the business section there is a twenty-four-inch main and inside of this section all mains are from twenty-four to ten inches. Through the rest of the city there is an excellent distribution at good pressure. Pressures vary from 110 to fifty pounds, this lower pressure being at a few elevated points in the city.

James G. Jones, Chief, Nevada, Mo.: I believe bright orange with a gloss is the best color for fire hydrants as this would enable them to be seen at night. Our fire plugs are not marked as we know the size of the mains to which they are connected, and are able to secure a good flow of water. We make it a rule never to run past a hydrant if possible.

Geo. Van Zant, Chief, New Castle, Ind.: Our hydrants are painted each year with "high visibility yellow." This has proven very satisfactory. We do not mark the hydrants in any way to determine the size of the main. However, I am of the opinion that this practice would be worth while.

Each company has their respective hydrant for various locations. We connect to the hydrant nearest to the fire.

Frank C. Newman, Chief, Melrose, Mass.: The barrels of our hydrants are painted black and the tops yellow. We find this combination is best for locating the hydrants both in the winter and summer. We do not mark them in any way to indicate the size of the main. They are marked to determine the pressure. Hydrants with pressure below sixty pounds, four-inch connections, are painted entirely yellow. If sufficient pressure is not available we connect to pump, if it is not a dead end. If so, we connect to the next hydrant to the fire.

D. J. Noonan, Chief, Vallejo, Cal.: Hydrants are painted orange. We have painted them white and red at different times but have found orange to be the most satisfactory color, especially at night.

We do not mark the hydrants in any way. We have a map in the fire house which shows the water mains of the city. Each fireman knows the size of the main on every street.

In answer to your third question I would say that we have a gauge and the hydrants are tested. On streets that have low pressure, we do not use the hydrants.

B. J. Reilly, Chief, Ithaca, New York: Hydrants are painted red. However, we contemplate painting them orange this summer. We do not mark the hydrants in any way to determine the size of the mains supplying them. We have four sources of supply with different pressures. Each source supplies a particular section. We know these sections and the size of the mains. Different sources of supply may be connected in a few moments, if it ever becomes necessary.

Arthur J. Baker, Chief, Lewistown, Mont.: Fire department hydrants are painted red. We mark the hydrants by stamping the number of pounds static pressure on the top of each one. We believe that a necessary requisite for fire fighting is to know your water system, the source of supply, capacity of storage or pumping plant, general location of valves, type, and the location and flow capacity of each fire hydrant. This might not be practicable in a large city, but it is certainly of value in our city.

Benj. Wolbert, Chief, Salina, Kan.: Our fire hydrants are painted a light orange. However, we do not mark them in any way to indicate the pressure available. We have a map at fire headquarters which gives the size of all mains laid in the streets and the size of all stubs from mains to hydrants. Firemen put in two hours each day studying the map, especially in the high value district. In this way they know which hydrant to connect to when they reach the scene of a fire.

John E. Saulnier, Chief, North Adams, Mass.: Hydrants are pointed red where the pressure is low and red with white tops for high service. We have no hydrant markings. We do not have to avoid any of the hydrants. Inspection is made annually by the fire department to acquaint the firemen with the locations. If a hydrant is out of commission, prompt repairs are made by the water works department. They always cooperate with us by giving us good hydrant service.

A. H. Wygal, Chief, Pulaski, Va.: Our hydrants are painted red with white tops. They are marked near the top to indicate their size and the size of the main to which they are connected.

I determine the hydrant to use at a fire. Knowing the condition of the hydrants I can tell which to avoid using.

Guy Giddings, Chief, Hastings, Mich.: We paint hydrants bright red but do not mark them in any way. No hydrant is connected to anything less than a four-inch main. We do not have to avoid any hydrants in this city as they are all in working condition.

W. E. Street, Chief, Litchfield, Ill.: Hydrants are painted orange. We have three different sizes of mater mains and each hydrant is marked in order to be able to tell at a glance the size of the main to which it is connected. The markings are as follows: ten-inch are painted all orange; six-inch have orange base and green tops; four-inch, orange base and red tops and, lastly, a black strip is painted around all plugs that are located on a dead end of a main.

W. P. Weeks, Chief, Battle Creek, Mich.: Hydrants are painted green. We do not mark the hydrants in any way as all of our hydrants, with the exception of those located on high elevations, give good streams. In the higher districts, where the pressure is not as good, we use pumping engines. We do not have any hydrants that should be avoided in case of fire.

F. J. Murphy, Chief, Dunmore, Pa.: Our hydrants are painted red and black. While we do not mark them,

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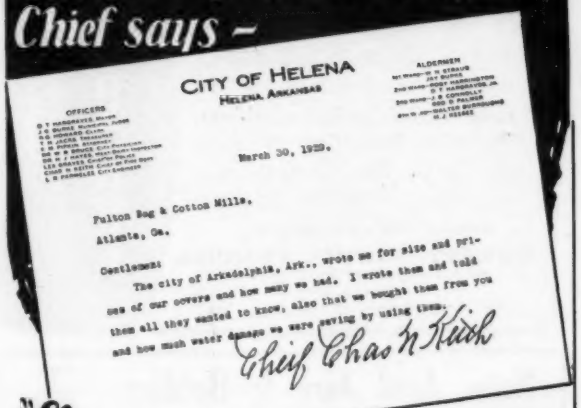
Large pieces of metal were hurled over a wide radius when fire wrecked a river warehouse in Philadelphia. Many were injured, and several firemen were overcome by the chlorine and ammonia fumes. Four alarms were sounded to combat the fire. The damage has been estimated at $500,000. Nothing but scraps of metal remained to indicate the location of the warehouse.

Another Prominent Fire Chief says –



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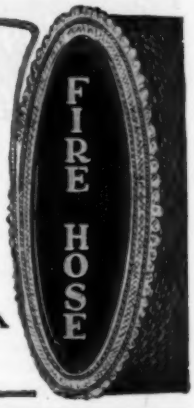

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Opens from driver's seat or from floor. Many repeat orders from users.

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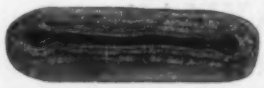

BI-LATERAL FIRE HOSE CO.

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the men are instructed in order that they may know the condition of every hydrant. Should anything happen to a hydrant, our department is notified immediately.

Thos. M. Dillon, Chief, Grand Island, Neb.: The caps of hydrants are painted white and the rest red. None of our mains is less than six-inch. Therefore we do not mark the hydrants in any way. Tests are made every spring and fall in order to find out whether anything is out of order. If any of the hydrants are out of order, this fact is reported to my office. I am also notified when repairs have been made and the hydrants are ready for service. In this way we are kept informed of the condition of all hydrants and when responding to a fire we connect to the nearest plug.

Archibald Howard, Chief, Ogdensburg, N. Y.: Hydrants are painted yellow and each one is marked with the size of the main to which it is connected. Our men make a study of the chart in order to learn the different size hydrants in the city.

William Tunison, Chief, Cranford, N. J.: We paint hydrants green with white tops. All of our mains are six- and twelve-inch. We use every hydrant available at a fire as the water pressure is plentiful.

Jos. Kohler, Deputy Chief, Irvington, N. J.: Hydrants are painted green. Fire flow test made here showed that all hydrants will give us good fire streams, therefore none of them have to be avoided.

Geo. Layton, Chief, Savanna, Ill.: We paint hydrants yellow with white tops but do not mark them in any way. All of our hydrants are in good working order and we therefore do not find it necessary to avoid any.

C. T. Lindsay, Chief, La Grande, Ore.: Our hydrants are painted orange but we do not mark them. Carefully studying the water system in this city enables us to know just what hydrants can be used.

H. E. Colby, Chief, Franklin, N. H.: We paint our hydrants black with white tops but do not mark them in any way to determine the size of main to which they are connected. We do not have to avoid any hydrants at fires.

T. H. Mahoney, Chief, Westfield, Mass.: Hydrant bodies are painted red and the gate connections are silver. We do not make any markings to indicate the size of mains. We have no way to determine which hydrants to avoid. Our supply is gravity with a pressure of from seventy-five to 125 pounds.

Wm. Berger, Chief, Fremont, Ohio: The body of the hydrant is aluminum and the tops red. Hydrants are not marked. We have a map of the city and keep posted on pressure and volume in the different locations.

Frank Zielsdorf, Chief, Wausau, Wis.: Hydrants are painted red but are not marked in any way. We are familiar with the different size hydrants in the city. The only way we know which hydrants to avoid at fires is by actual experience.

W. D. Ray, Chief, Logansport, Ind.: Our fire hydrants are painted a bright yellow They are not marked. As we employ pumps we use the hydrant nearest to the blaze.

Frank Cescelini, Chief, Trinidad, Colo.: The bodies of our hydrants are painted orange and the tops black. We do not mark the hydrants. The pressure is adequate (gravity system) all over except at extremely high points. We use the nearest hydrant to the fire.

Andrew Erdman, Chief, Owatonna, Minn.: Hydrants are painted red with white tops, for six-inch mains and green with red tops for four-inch mains. We use the hydrant opposite from the fire if it is not too far away.

E. Ellis Wagner, Chief, York, Pa.: All our fire hydrants are painted a bright yellow. This color is very easy to distinguish during the day or at night. We are so located that we have an almost equal pressure on all our hydrants and there is sufficient water at all times. We have no hydrants at present that should be avoided.

W. J. Hudson, Chief, Pleasantville, N. J.: Our hydrants are painted yellow but are not marked. We make no distinction of hydrants at fires.

S. J. Flores, Chief, Shreveport, La.: Hydrants are painted red. We do not mark them in any way to determine the size of mains. I have a map of all the hydrants and the size of the mains to which they are connected. However, I do believe it is a good thing to have the hydrants marked to show the size of the main.

E. E. Chase, Chief, Lynn, Mass.: Our hydrants are painted black with yellow tops. However, they are not marked for the size of mains. All our companies are requested to know the size of the mains in their respective districts.

Thos. Africa, Chief, Huntington, Pa.: The bodies of the hydrants are green and the outlets red. No, we do not mark hydrants for size of mains. All of our hydrants are suitable for a one thousand-gallon pumper.

John Parker, San Angelo, Tex.: Our hydrants are painted red. The size of the mains is taught in our daily school in order that no mistakes will be made as to which hydrant to use at a fire.

E. A. McGranahan, Chief, Wheeling, W. Va.: Our hydrants are painted yellow. While the hydrants are not marked, the men have maps to enable them to learn the size of the mains. As the men are taught the size of the water mains in the various streets, they should know which hydrants to avoid.

M. J. Kennedy, Chief, West Orange, N. J.: Our hydrants are painted green with white tops. They are not marked in any way to signify the size of the main. One of the rules of this department is that officers and members must familiarize themselves with and know the locations of hydrants and the size of the water mains.

W. J. Mohr, Chief, Santa Monica, Cal.: Our hydrants are painted aluminum, but are not marked in any way. There are 850 hydrants in this city which has an area of seven and a half square miles. There is sixty-five pounds pressure at all plugs and the mains are from six to twenty-four inches. The reservoir capacity is twenty millions gallons and the elevation of the reservoirs is from 150 to 350 feet. We have a grid system.

Frank Clark, Chief, Belvidere, Ill.: Our hydrants are painted yellow but are not marked. At fires we use the nearest hydrant.

H. J. Williams, Chief, Macon, Ga.: Our hydrants are painted red with aluminum tops. We do not mark the hydrants but there is an office map which gives the location and size of the mains. We use the most convenient hydrant at fires.

Andrew Milspaugh, Chief, Merrill, Wis.: Our hydrants are painted red but are not marked in any way to determine the size of the mains. However, we know the size of the mains and are guided in this way at fires.

Robert M. Tappin, Chief, Gardner, Mass.: Low pressure hydrants are painted red with aluminum, and high pressure hydrants are painted yellow with aluminum caps. The aluminum cap makes them easily distinguishable at night. The older hydrants have four-inch lines with no pump connections. The newer and larger ones are of modern type with pump connections and are connected to six-inch mains. We find this a very good arrangement.

C. A. McKinley, Chief, Clinton, Mo.: Our hydrants are painted lead color but are not marked for the size of mains. Our men are required to know all the mains in the city and attach lines to the largest ones at fires.

Early Apparatus Builder Dead

With the death of Henry M. Lane, the fire-fighting profession has lost a pioneer builder of fire apparatus.

He was educated in the public schools of Cincinnati and later was graduated from the Massachusetts Institute of Technology. He was president of the once well known firm of Lane & Bodley Co.

The original works of the Ahrens Manufacturing Company was owned by Latta, inventor and builder of steam fire engines. The business was sold to Lane & Bodley in 1863, and the new company built seven or eight machines from Latta's patterns and then sold the business in 1868 to the Ahrens Manufacturing Company who made improvements on the old designs.

During his professional career, Mr. Lane supervised the construction of the Mt. Adams Inclined Plane Railway, and devoted much of his time to the improvement of the various types of steam, hydraulic, and wood working machinery produced by his company.

Circleville, Ohio Rejects Bids—Bids for supplying new fire apparatus were rejected by Circleville, Ohio, as being too high. It is believed that new bids will be invited.

Latrobe, Pa., to Buy Fire Apparatus—Latrobe, Pa., has been authorized to buy a combination ladder and pumper.

Work Started on Parma, Ohio, Fire House—Ground has been broken in Parma, Ohio, for a new fire station to be completed some time this fall. The building will cost $42,000.

FALSE ALARMS

PADDLING MARY

The biggest party in the history of the town took place when the community fire house and civic center was opened. Of course, no one came for the speeches, but then refreshments were served and there was dancing. One of the girls who was lucky enough to be present, told her friend about the event.

"About eleven o'clock the party waxed merry."

"Poor Mary," was the reply.

Somehow it doesn't seem right that we should have hot weather in summer when we need cold weather, and cold weather in winter when we need hot weather.

WARMER CLIMATE

A lady who was ordered to leave the city because of her health, purchased a farm near the Canadian border. After she had adjusted herself, she applied for membership in the rural fire protection association, but since there was some doubt concerning jurisdiction, a survey was made.

A member of the committee reported: "Madam, I am happy to say that you can join our association, for the survey shows your farm is in the United States."

"Oh, I am also happy," she replied. "I have heard that winters in Canada are so severe."

She may be the life of the party, but she'll soon be the death of me.

LOSS ANYWAY

Firemen who are mechanically inclined are always fussing with some thing they hope will revolutionize firefighting. Andrews had designed some little jigger to aid in raising ladders, and of course a reporter came to inspect it. Andrews was very happy and remarked to a friend:

"Let's see, how does that famous saying go: 'If a man make a better mouse-trap than his neighbor, the world will beat—will beat—'"

"That's right," said the friend, "will beat him out of the patent, no doubt."

When you are undecided as to the lesser of two evils, always choose the best looking.

PRACTICAL INSTRUCTION

A prominent banker agreed to address the boys at a reformatory. He prepared his talk with care, and the hundreds of erring lads listened to him with interest. They seemed moved. The banker believed he had done them good.

Then came question time.

A boy with very red hair and very large ears stoods up, and asked:

"Mister, can you burn through them new style safe doors with an oxy-acetylene torch?"

ALL INVITED

The following is taken from an account in a country newspaper:

"The ladies of the church have cast off clothing of all kinds. They may be seen in the basement of the church any afternoon this week."

"Let's visit the pawnshop. It is getting to look more like home."

WORRY DID IT

Two men met on the street one day.

"Hullo, Bill," said one, "I haven't seen you for weeks. But what's wrong? You're lookin' seedy. Been ill?"

The other passed his hands across his brow.

"No, I ain't been ill," he replied, "it's work that's doin' the harm—the damn fire department—work all day long with only time out for meals. Think of it."

"Awful," agreed the first. "And how long have you been there?"

"I ain't been there yet. I start tomorrow."

MODERN INVENTION

A chief who had done very little traveling was delegated by the Chamber of Commerce to see state officials in reference to an epidemic of arson cases. He took a sleeper for the state capitol.

He remarked to the porter:

"George, I want to be called at six o'clock in the morning."

"Boss, Ah guess you-all isn't acquainted with these heah mode'n inventions. See dis heah button, heah? Well, when you-all wants to be called, yo' jest presses dat button, an' we comes and calls you."

LOCAL CHARACTERISTIC

After the pumper test, the delivery engineer went back to the fire house to wash up. He noticed that it was hard to get a lather.

"Gee whiz, don't you think that you're water here is awfully hard."

"Yes—but it rains harder here."

Life can't hold more than this:
A baby's smile, a woman's kiss,
A pipe, a book, a fire, a friend,
And just a little cash to spend.

WATER EVERYWHERE

Every room in an Indiana hotel has the following sign:

"This hotel is fully equipped with automatic sprinklers. Statistics show that loss of life has never occurred in a sprinklered building. In case of fire you may get wet but not burnt."

A witty guest, posted the following prayer, that he had composed:

"Now I lay me down to sleep,
Statistics guard my slumber deep.
If I should die, I am not concerned—
I may get wet but I won't get burned."

COMMERCIALLY SPEAKING

"Fireman, fireman, save my child," shouted the distraught mother.

"Why madam?" asked the would be hero.

"Because he isn't paid for yet."

HELP
TELL HIM IT'S A SUGAR COOKIE! MAYBE THAT'LL ATTRACT HIM!
SCARE HIM DOWN HERE. I'LL GET HIM!
MAYBE IT AIN'T THAT KIND OF A POLLY! CALL IT MARTHA AND SEE IF IT ANSWERS.
OH PA! AINT THAT A EAGLE?
THAT'S THE THIRD HOOK AND LADDER TRUCK I'VE SEEN SO FAR TO-DAY! WONDER IF THEYRE PRACTICING!

—Drawing by "Art" Espey

"The Parrot Is Not Extinguished But Is Under Control"

Olivia did it. She was responsible for one of the busiest days that Chief Arthur Spring and his department at Laconia, N. H., has ever experienced. It was all because Olivia (firemen have called it by other names) became bored with domesticity and went through an open window to seek other parrots. Chief Spring was consulted and a ladder raised. Polly was offered several crackers from the topmost rung of a ladder, but the bird flew to another perch. When a neighbor saw the bird in a tree, the fire department was again called—and then a third call was received. But on the last trip, the men knew their mission. A large fishnet was about to be tossed around Olivia when the bird headed straight for her home. The chief entered on his record, "The parrot is not extinguished but is under control."

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All operating threads are dry, being above the stuffing-box.
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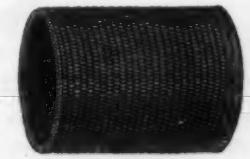
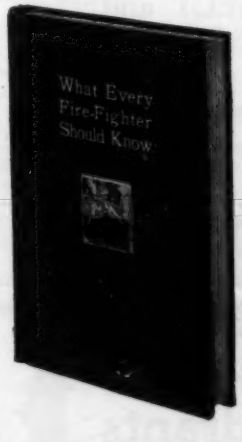


Every Fire-Fighter Should Have This Book



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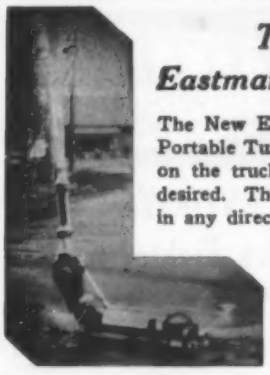

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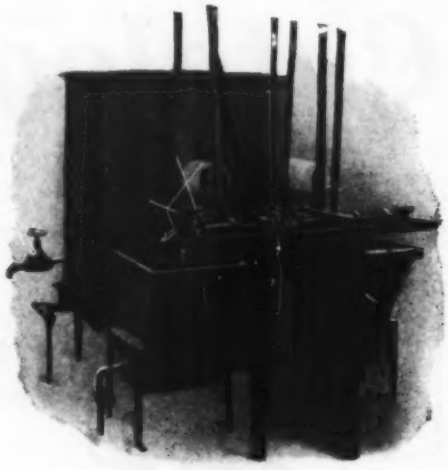

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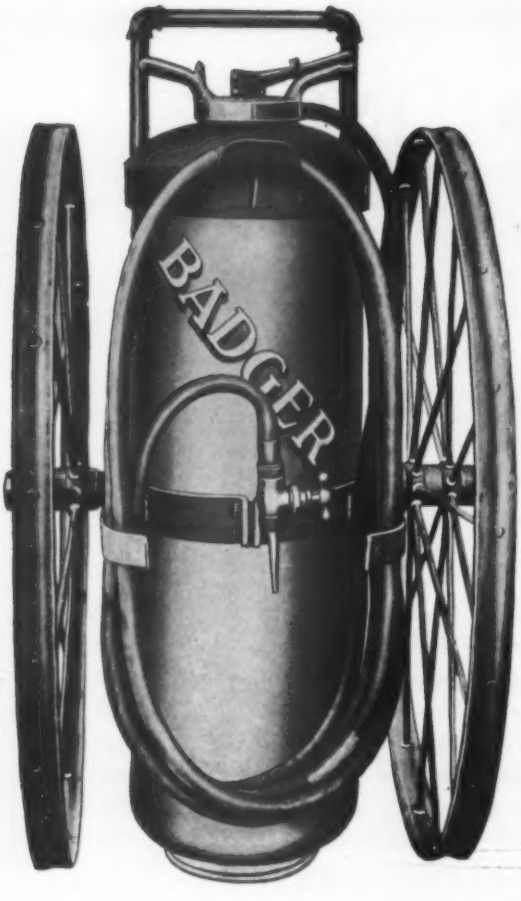

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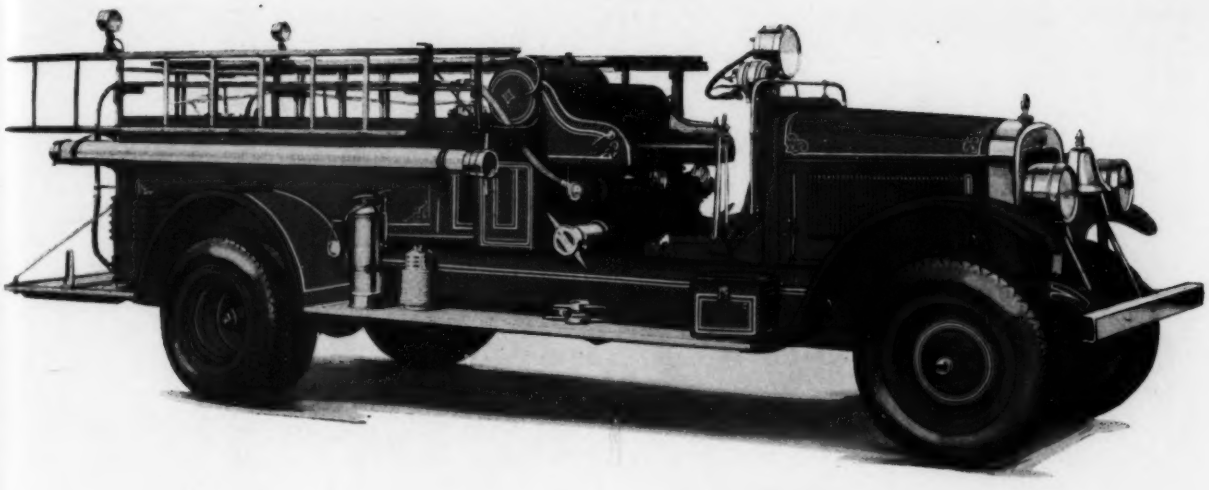
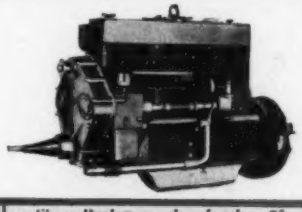
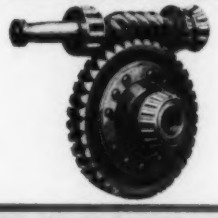
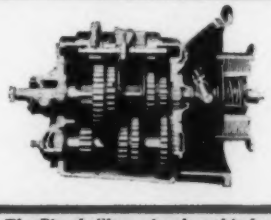




Six cylinder, overhead valve, 95 horsepower motor of the Pirsch Champion



Sturdy Timken worm gear drive mounted in roller bearings.



The Pirsch Champion has this four speed forward transmission and a multiple dry disc clutch.

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Full information and specifications covering Pirsch 500, 600, 750 and 1000 gallon pumpers and the complete line of reliable Pirsch fire fighting equipment will be mailed on request. Write.

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